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## Why I Am a Pictorial Photographer

**(Number Twenty-One)**

ALEXANDER LEVENTON

MUSIC and photography have been my companions since childhood; but while the former was always being taken very "seriously" in the family, the latter hardly amounted to anything more than occasional "pressing the button".

In May, 1914, I left my native Russia to study violin with Professor Sevcik in Austria. The war broke out a few months later. I was arrested and transferred to a camp of civil prisoners. My Brownie Camera—yes, I also started with a Brownie—was confiscated by the Austrian Police and that was the end of my "early photographic career".

Seven years later, after having gone through four years of prisoners' camp life, two years of Russian revolution, and emigration to Turkey, Destiny brought me to Rochester, New York, to fill the chair of the concertmaster of the Eastman Theater Orchestra. The almost forgotten hobby was resumed on the first Christmas Day in the Kodak City, when my wife presented me with a 1A Kodak. She probably regretted it often enough since then; but that is a subject which has been discussed many a time in photographic literature, and I therefore am not going to dwell upon all the details of her troubles with pyro-stains in the bathroom and kitchen. Things, however, were getting worse and worse. I began to read photographic magazines. One of them gave me the first prize in the beginners' competition. The 1A was replaced by a Graflex, the printing-frame by an enlarger, and I "got busy". I graduated into the Advanced Workers' Class, and finally got courage enough to submit prints to Buffalo and Pittsburgh. The big thrill came at last—my name was in the catalogs.

Portraiture, which always appealed to me more than landscape photography, has gradually become my "specialty", and a little less than a year ago I opened a studio. I have often thought of Mr. Angus Basil, who in his lecture at the Royal Photographic Society expressed the following opinion: "Portraiture is hardly a subject for the professional photographer. He has to sell the photographs he makes. The amateur does not have to sell his and, therefore, he can make portraits." I did not agree with him at the time; but I do now. It is not possible to make real portraits and at the same time make a living. Several of the portraits made in my studio professionally and accepted by the "pleased customer" were afterwards exhibited or awarded prizes in competition; but these are exceptions.

Photography as a hobby is giving me more satisfaction and joy than even music ever did; but comparing the two as professions, I do not hesitate to choose the latter. In music I am free to give *my* interpretation, the interpretation which I find best, according to whatever knowledge, ability, education, and talent I have. I can be sincere, and the audience will always feel, appreciate, and enjoy sincerity of performance. Sincerity of performance in photography will be appreciated by salon judges; it is the most essential and important condition of satisfaction to the artist himself; but it is useless in professional photography. It is a curious thing that those portraits of mine which other people admired most were usually liked least by the sitter himself. In my studio I have to deal with different individuals of different tastes and ideas of what a good picture should look like, and what they themselves should look like; and unless I give my customer that certain aspect of himself which he wants, I am not a success.

"This is very fine", said one lady to me, picking



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out one of her proofs. "It doesn't look like me; but I don't care as long as it's a good picture." "This is the most beautiful picture I've ever seen, but it doesn't look like me", said another, rejecting her best portrait. I agreed with both of them!

To be able to produce results which bring æsthetic enjoyment to others is the greatest satisfaction in every form of art, and that is what made me love photography and music. They are both great hobbies and both interesting professions; but there is much more fun to satisfy a jury than to "please a customer".

The print accompanying this article is one of my favorites. It has qualities which I enjoy seeing in the work of others and which therefore I am glad to see in my own efforts. It is a portrait of the "straight" type, extremely simple in construction. It is vigorous in the rendering of light and shade, yet its tone-values are economically used within a low and short scale. The likeness is perfect, and the sitter's character and mood are well defined. I have one more good reason for liking "En noir"; it is a portrait of Mrs. A. Leventon. You see, she gave me that 1A Kodak for Christmas six years ago, and that is "Why I am a Pictorial Photographer" now and, without a doubt, always will be.

# Up in British Columbia With a Camera

## Part I

SAMUEL F. RACINE, C.P.A.

YES, there is nothing like a contemplated trip for stimulating the mind and the imagination. All the maps had been studied, all the literature read, our course mapped out, and we were on our way. The camera I took was an Ica Trona, 3¼ x 4¼, and all the pictures in this article, except one, were made on Agfa filmpacks.

As is true with so many business men, the apparent object of the trip was of a business nature—in this case, the inspection of a mine; but the real, actual purpose of the trip was to get away from home and to visit new places, see new scenes, and have new experiences.

> He must go—go—go away from here!
> On the other side the world he's overdue.
> 'Send your road is clear before you when the
> old Spring-fret comes o'er you,
> And the Red Gods call for you!
>
> KIPLING.

The trip from Puget Sound to Vancouver is made during the night, on one of the wonderfully fine Princess boats. After visiting Vancouver, spending the day seeing the points of interest, and, with a sort of proprietory attitude, taking our Canadian friends out to visit the United States battleship *Pennsylvania*, which was visiting in the harbor, we embarked on the Canadian National steamship *Prince Rupert*.

The dock was crowded, as usual, and the boat had a particularly large passenger list; but most interesting of all was the ship's orchestra, which entertained us, finally closing the entertainment with "Aloha Oe" as the vessel was pulling away from the dock. This all happened in the evening so that no attention was given to cameras at that time; but the early morning found us plowing our way up the inside passage toward Alaska, and cameras soon made their appearance.

Although our destination was only Prince Rupert, and the most fascinating portion of the inside passage to Skagway, Alaska, was beyond, we were much impressed with the scenery. The inside passage is something rather difficult to conceive of by those accustomed to ocean travel. It is like a long river, very deep, yet filled with rocks, many of which have not been charted. The mountains on both sides are in sight all the time; in fact, in many cases it is impossible to look ahead more than a few miles, owing to the height of the mountains and the curves of the channel. There are but two or three places of the entire thousand miles of the inside passage to Skagway where the waves from the ocean are able to enter. The longest of these places requires only a couple of hours to pass; so that unless a person is decidedly inclined toward seasickness, the possibility of becoming sick is rather remote. In a great many places on the trip to Alaska, it seems easily possible to throw a rock from the vessel either way to shore. The precipitous sides of the mountains extend up thousands of feet, however, so that it is frequently impossible to see very much of the sky.

The most interesting things that are noticed, if the vessel happens to reach the points during daylight, particularly during the spring, are the numerous waterfalls which seem to come out of

OCEAN FALLS SAMUEL F. RACINE

nowhere, at the top of the cliffs, hundreds of feet above the vessel, and fall in a mist of spray either directly into the salt water or very near it.

Miles and miles of the trip—in fact, nearly all of it—was made with barely a ripple on the water, except that caused by passing boats. One of my pictures was made from the upper deck, just in front of the bridge. The vessel was going full speed ahead, the time of exposure was one-tenth of a second, and, even with the vibration of the boat and the possible effect of the waves, the shore line a mile or more away was absolutely clear. The whole trip was equally still, except for a couple of hours.

While approaching Queen Charlotte Sound, we all maintained that the boat-schedule had been maliciously arranged so that the rough water usually encountered there would be passed during the noon hour and additional profit would be made for the boat company. However, it was only a wild guess. In any case, very few seats at the table were vacant, even though Queen Charlotte Sound was entered just a few minutes before the gong sounded.

Our first stop occurred the succeeding evening, about twenty hours out of Vancouver, at Ocean Falls, where one of the larger paper mills is in operation. Evidently it received its name from the fact that originally the falls were right at the edge of salt water. We walked up through the main street of the city, hoping to get above the big dam and find a large body of water there which, with the surrounding mountains, would make a good picture. Just as we neared the dam, however, the boat's whistle called us back; so that whatever might be on the other side of the dam is still a mystery to us. We satisfied ourselves with the excuse that the clouds were low on the mountains and that we shouldn't have obtained a desirable picture, anyway. At any rate, we succeeded in getting a very interesting picture from below the dam, showing the heavy mist which obscured the mountains. As with all my landscapes, I adjusted the speed to one second. This being standard, it eliminates one computation or factor to be considered when making an exposure. My Winne exposure meter indicated stop F/8 for one second and my picture turned out well.

We then proceeded on our way to Prince Rupert. One interesting feature of the trip is the numerous small boats that are passed. Many of them are pleasure boats, but there are a great many fishing-boats as well. The bane of the captain's life seems to be endeavoring to avoid fish-nets. Every little while the boat would keel over to port or starboard and make a short turn, only to right itself in a few moments. Curiosity got the better of me; so I had to step out on the stern and see the cause of these sudden maneuvers. I discovered that fishermen had the channel filled with long lines of net. When we got close enough, it was easy to distinguish them by the floats, but at a distance they could be distinguished only by the small flags at the ends of each net. The flags were not always floated with the greatest of care, and in all cases

KITSALAS PEAK SAMUEL F. RACINE



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SHENANDOAH MOUNTAIN SAMUEL F. RACINE

they were very small; so that the quartermaster or whoever might be at the wheel had to be on careful watch all the time. I imagine a fish net would make a beautiful mess if it became entangled with the propellers. It was impossible to get a satisfactory picture.

Prince Rupert at one time was advertised as the logical large city of the West Coast, owing to the fact that it is closer to the Orient than any of the cities farther south. I do not know whether it has grown much in the past ten years or not. However, it is quite a town—paved streets, city park with a totem pole, and all the other "makings". In Prince Rupert, we declared customs on any baggage brought through from the States, and then started on our journey overland on the Canadian National Railroad to Usk. We found a rather long train with a "play" engine. We inquired the reason for the small engine and found that they had almost a water level route and that the rails were not heavy enough to carry larger ones. The engine struggled earnestly and was able to pull us along at an average of about twenty-five miles an hour. It is surprising how level the road-bed is, particularly in view of the precipitous mountains that are on both sides of the river. The road follows the Skeena River for a great many miles.

Numerous stops were made during the first part of the journey, owing to the canneries that are situated along the Skeena River. At each cannery the population of Indians and Chinese—as well as the white folk—came out to see if anything interesting would happen at the train, or perhaps the train itself was the principal object of interest. I noticed one or two men who impressed me with their distinctive appearance. There was one man in particular who stood out as a fine example of manhood—reddish hair, straight nose, blue eyes, clear complexion, and every evidence of culture. He was on the porch of one of the little cottages, and the way he was talking to a number of half-breed youngsters indicated that he was a squaw-man. Discussion as to the reason why a man of such outstanding qualities would become a squaw-man brought forth the statement that a certain squaw-man, when visiting the towns, would frequently remark that every time he came to civilisation and saw white women chasing around, seeing how little clothes they could wear without being arrested, gossiping about their neighbors, and neglecting their children, caused him to wonder why more white men didn't choose squaws for wives.

Usk was our destination—a small town in Northern British Columbia, about one hundred miles from Prince Rupert. Evidently, at one time Usk was a prominent trading-post; now, however, there seems to be no particular industry to keep it alive. There are probably fifty or seventy-five people in town, nearly every one of whom claims "Thar is gold in them thar hills", and is the owner of a number of "likely-looking prospects". The population includes quite a number of Indians, and a few Negroes who are reputed to be descendants of Negroes who escaped from the South by the underground railway during the period before the Civil War and wanted to get far enough away so there would be no chance of their ever being taken back—I'd say they got far enough away!

Taking all in all, the population seems to be well above the average that is found in similar communities. There are quite a number of very striking examples of the finest type of people. A great many of the inhabitants are real characters, and an imaginative person could easily write a delightful book, just dwelling upon the oddities and eccentricities of some of the people found here, and their mode of living, provided it all could be done without disclosing their identities. This would be entirely possible in a novel; but, of course, is not practical in an article like this.

Usk cannot claim to be a Northern town—Northern towns, you know, have a dog-population greatly in excess of the human population, and there were very few dogs in Usk.

I submit two pictures of mountains made from Usk at F/16 and one-second exposure with a three-times filter—Kitsalas Peak and Shenandoah Mountain. Mountains offer one of the most difficult subjects to photograph. If they are snow-capped, the blue sky and the snow on the mountain both photograph white, and in the picture it is almost impossible to distinguish between the snow-line and the sky. Also, the distance and brightness of the peak and the dark foreground are so far apart in the matter of value, and the contrast between them is so great, that it is necessary to "strain" a plate or film to its utmost to get it to record properly both the extremes of contrast. A filter is almost a necessity if the snow-cap is to be distinguishable from the clouds or sky. I also believe that a small aperture serves to emphasise the detail and hence permits a more satisfactory recording of the extremes of light and shade.

Another factor worthy of note, but frequently impossible of correction, is the matter of perspective, which causes higher peaks in the distance to look lower than peaks of less elevation in the middle distance. The picture of Shenandoah Mountain shows this. The distant peak is much higher than the one in the middle distance, yet it appears much lower. The peak we climbed is higher than the distant one, but it is just behind the other peak; so we could not show it in the picture.

Mountains are not very satisfactory from a composition standpoint, as they usually result in a mass without an object of special interest and without lines forming acute angles to excite a person's interest. Massiveness and impressiveness are the things that appeal in mountain-photography.

Probably the poorest place to stand when making a picture is between the rails of a railroad-track, on a road, or in any place where the side lines converge rapidly. A picture made from such a location gives altogether too much width to the roadway in the foreground and this overbalances the rest of the picture. A mountain is such a poor subject for photography that it needs vertical lines to make it interesting, or, better yet, some lines that form an apex in the distance; since lines coming together in the distance are probably a little more likely to excite the eye and hold the interest than vertical lines. The value of the picture of Kitsalas Peak, I believe, is due to the interest created by the converging lines of the railroad-tracks, and the vertical lines caused by the trees at the edges of the picture and along the bottom of the mountain. This vertical line idea is also carried out by the gullies near the left side and the top of the picture. Taken all together, they emphasise the height of the mountain and impress you with the idea that it is a real peak and not just a hill.

Another difficulty that is encountered in photographing mountains is that they have a tendency to lie down if you are too close to them. It's just like making the picture of a roof. If you are so close to the house that the camera and the lines of the roof are on the same plane, you just don't get any picture of the roof at all; or if you do, it looks so flat that it is hard to determine its angle. In the picture of Kitsalas Peak the perspective is so good there is no question at all but that there is a level space up to the point where the lines of the track converge, that the mountain starts off with a small hill, and that it then assumes a definite slope along the right side up to the top; also, that there is a deep gully running diagonally down and across the picture. Perspective to the extent shown in this picture, I believe, can be obtained only by the use of a very small stop and a very good

LUCKY LUKE MINE — SAMUEL F. RACINE



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lens. In this case, the stop used was F/16 and the lens a Carl Zeiss.

Even in cases where the converging lines are not necessary in order to accentuate interest in a picture, it might still be desirable to photograph more of the foreground than you need; since by so doing you will find that you can cut off a considerable part of the foreground, and the remaining portion of the railroad or roadway will have a more uniform width throughout its length, will not cover the entire width of the picture at the bottom thereof, and will not overbalance the picture.

The first thing we did after reaching Usk was to purchase mosquito-nets under which to sleep. We found some arranged with a top and four sides, so that they could be extended above the bed. There were not so very many mosquitoes around Usk; but past experience in the North warranted the precaution of a good strong net available all the time.

One of the stories they used to tell during Klondike days about mosquitoes was of a fellow who went crazy over the idea that, by selective breeding, he was going to be able to obtain mosquitoes large enough to take the place of dogs for transportation. As you know, it is commonly thought that most of the people who remain permanently in the North—the "sour-doughs"—are just a little bit "off"; at least, the "sour-doughs", themselves, maintain that they must be crazy or they wouldn't stay there year after year.

A story is told of one fellow who was declared to be insane and who was taken to the asylum at New Westminster. After receiving proper food and care for a few months, he was found to be sane and permitted to leave the asylum. When he returned to the old camp, the boys showed quite a tendency to make fun of him and frequently referred to him as being crazy. His comeback was that he was the only man in the camp who had a certificate to show that he wasn't crazy.

I knew that the boys at the camp did not know that I could flap a flapjack with the best of them, and had me spotted for a *cheechahco;* therefore I expected that they would try to play the customary jokes on me. I had been through all that myself, and expected to find a lot of dirty old socks hanging up over the stove; as I knew one of the favorite stunts that is pulled off on a *cheechahco* is to have someone, while soup is being eaten, start telling a story of the delectability of old sock soup and the fame of some frowsy-looking old cook, who hadn't shaved for a year or more, for his ability to make old sock soup so good that it could not be distinguished from the finest of consommé. Usually the *cheechahco* decides about that time that he doesn't like soup as well as he thought he did. I was agreeably surprised to find the cabin in the neatest and tidiest of condition, and no stunts were pulled off for my particular benefit.

While I was in town, I saw one fellow do something that I never had seen attempted before. He was partially intoxicated—enough so, I presume, to make him begin to see double—and whenever he looked at me, he always covered up one eye. He would try one eye and then the other. After my experience with him, I was afraid to wear my knickers for fear some enterprising youngster, having imbibed too freely, might think I was "suffering" and would take a shot at me on general principles. My friends, also, advised that I dress like the natives. After they saw me dressed, they were unanimous in their statement that I "out-natived" the natives. They all tried to wear my clothes to see if they could look as tough as I did, but found it impossible.

Our first dinner was a decided success. The chief of our party is one of those fellows who want their pie baked before five o'clock in the morning, while the lard is cold, aren't satisfied unless the biscuits are three-deckers, and have to have their ham or bacon baked in the oven. We decided that anyone as fussy as he is should do the cooking; so we all overruled his expostulations and elected him chef.

Our first venture out of the town was to visit one of the prospects, the Lucky Luke, probably a mile out of town, but not over five or six hundred feet from the railroad. It seems to be a very valuable body of ore that had been worked at one time; but evidently the difficulties of transportation at that time and the fact that the ore had to be packed out in sacks made it unprofitable. I was with a mining engineer who had spent many years in the mining industry and, of course, he conceived the idea that we wanted to go into the mine, and stated that he would look around for some candles so that we could go there and see what the body of ore was like. I did not relish the idea of going underground in a leaky old mine, particularly where the water is three or four inches deep, the timbers rotted in many cases, and the sides caved in where timbers were broken. I found the candles first and put them into my pocket until he gave up the idea of going into the mine. Then, as we were leaving, I put the candles back for the use of anyone else who might be more venturesome underground than I am. The Lucky Luke is one of a great many similar properties which



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HEADWATERS OF THE CHIMDEMASH, NORTH FORK

SAMUEL F. RACINE

have been abandoned at one time or another throughout this part of the country, due principally to the difficulties of transportation.

My pictures of the Lucky Luke turned out well. We were in the trees, and my meter indicated an F/5.6 stop at one second. Notice that when making this picture I put both rails on the same side of me. This eliminates the perspective difficulties I mentioned above in connection with the picture of Kitsalas Peak. There was a fault in the film which resulted in an absolutely black spot on the print. The black spot, however, would pass unnoticed, as it appeared to belong there. I required a few prints of the negative and sent it to an enterprising photo-finisher who doctored up the black spot, making it appear like a bunch of white specks. They were altogether too prominent; so I had to go over the print with india ink to tone them down. You can see the flaw just to the left of the mine entrance, right at the end of the left rail. In order to make a correction of this sort it is necessary to use a very fine quill pen and to make dots only—lines will show. I also use a magnifying glass and usually find I am able to fill in quite accurately.

In the morning I was provided with a pony and we started for the first camp, about ten miles from town, near the head waters of the North Fork of the Chimdemash Creek just below the glaciers. The trail was fine. Blazes on the trees indicated that it had been cut through many, many years before and, no doubt, at one time was the route over which trappers and traders traveled when crossing British Columbia. Surveyors' stakes were noticed at different points along the trail and I was informed that next year the Pacific highway will be completed up to this point. Along the way I stopped to make a few pictures; but I really did not get into the interesting country until the succeeding day.

(*Concluded in February Issue*)

# Photographing Specimens Preserved in Alcohol

J. G. PRATT

*Scientific Photographer, U. S. Department of Agriculture*

THE scientific photographer is beset with many problems, especially in "Uncle Sam's" laboratories, where one has to photograph everything from the texture of a piece of silk to a cow, or from a giant redwood to a pathological subject such as a germ, magnifying the latter through a microscope several thousand diameters. He must be an inventor as well as a photographer, and he must have the patience and enthusiasm to take difficulties as they come, something to be conquered irrespective of labor or cost.

After ten years of such work, were I asked to name the most difficult of all such tasks, I should say that it was the photographing of the myriads of microscopic forms in Nature which, for purposes of scientific study, must be preserved in alcohol or other liquids.

Should the commercial photographer be called upon to photograph a specimen preserved in alcohol, even one of considerable size, such as those used in the medical profession, he would straightway run into difficulties.

These specimens cannot be photographed in the glass-container on account of distortion due to refraction; and, besides, the preservative fluid is generally more or less discolored. Also, as this class of work involves the use of ray-screens to differentiate the various colors or markings in the specimens, somewhat lengthy

FIGURE 1 J. G. PRATT

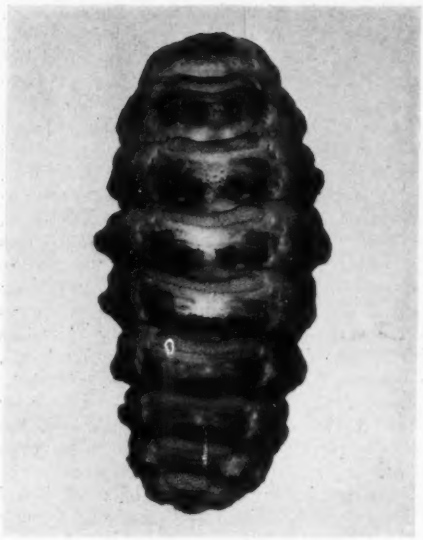

FIGURE 2 J. G. PRATT

exposures are required, and; all in all, it is probable that considerable time would be consumed in making the photograph.

If taken out of the alcohol or formaldehyde, the specimen would be more than likely to lose its shape or color in the process of drying; and even where the exposure is cut down to a few seconds, there is generally sufficient shrinkage to show movement in the photography.

If it can be photographed without any of the above difficulties, it saves a lot of time and experiment, and it does no harm to take a shot to find out. More often than not, however, we must resort to some method of photographing the object in a transparent liquid. Glass-cells are made for this purpose by the various optical companies; but they are expensive and might not fit the specimen in hand when obtained.

One of the requirements in photographing through a liquid is that the object must actually touch the cover-glass, so that refraction through the liquid will be reduced to a minimum; and the difficulty encountered with cells that one could purchase is that they could hardly be found with exactly the proper depth to accommodate the object. In each case, therefore, some form of base or support must be devised for elevating the specimen until it touches the cover-glass. This is also desirable, as there is a natural circular movement to any body of water, and, unless the specimen is held in place, it is almost certain to move during the exposure.

To obviate all these difficulties, the writer has devised a simple plan by which a cell can be made in a few minutes to meet the exact needs of the specimen in hand, and the only requirements are a sheet of optically corrected glass and a few ounces of modeling-clay or plasticine. A five-inch square of such glass was obtained from Bausch and Lomb Optical Company for five dollars and, so far, this has been ample in size for all this class of work encountered. Specimens preserved in alcohol for the most part are of small magnitude, so that no great outlay in cash should be required in this respect.

The procedure is as follows: Roll out a piece of modeling-clay—the kind which is mixed with oil—until the roll is about the thickness of the specimen to be photographed. Then, with a ruler, flatten the sides into a square until one thickness is just a little less than the height of the specimen—the other dimension doesn't matter. The length should be sufficient so that when the ends are brought together in the form of a square or circle, the interior field will be large enough to accommodate the specimen and allow sufficient space all round for an appropriate background.

The clay should now be pressed down on a piece of clean, clear glass until perfect contact is made. In doing this, it is best to place a sheet of paper over the clay and press down with another sheet of glass or other flat surface to prevent the clay from sticking.

Now fill the cell with boiled or distilled water which is free of bubbles, and, when the specimen has been placed in proper position, gently press

FIGURE 3 J. G. PRATT



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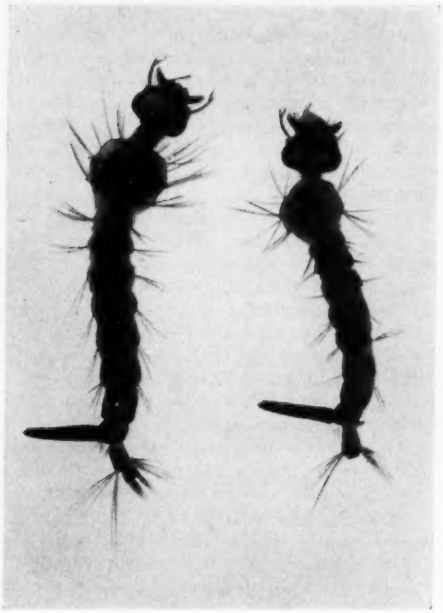

FIGURE 4 J. G. PRATT

the cover glass down until it touches the specimen, squeezes out all air-bubbles, and forms a perfectly watertight compartment. This cell will remain intact for half an hour or more, which gives ample time to make the photograph.

It is best to use the camera vertically, in order to avoid tilting the improvised cell, since the cover-glass is held in place merely by suction and the stickiness of the clay.

Either white, black, or gray backgrounds can be used—close up, if a shadow is desired; or several inches below, if otherwise. White-and-black backgrounds can be "doctored" up; with gray, however, they must remain as photographed, and unless the glass is free of grease-stains and the water is free of dust or other impurities, the background is likely to be mottled.

Figure 1 shows the construction of the cell, and Figure 2, one of the cattle-grubs *Hypoderma bovis*—magnified 3 diameters—the last larval instar found beneath the skin on the backs of cattle. This insect perforates the hides so that the leather is unfit for tanning-purposes.

In photographing minute specimens in alcohol, or those marine forms which would shrivel or become distorted if taken out of their natural element, we are up against still greater difficulties.

In micro-photography—that is, photographing at high magnification direct from the specimen, you are constantly striving for the impossible. You hardly hope for a perfect photograph, but you must experiment until you feel that you have secured the best definition and color-rendering and the least distortion which modern lenses and your other equipment will permit. In this work the principles of lenses work backwards, and it is the long-focus lens which gives the greatest depth of focus. We must, therefore, use the longest-focus lens which the bellows draw of the camera will permit for the magnification desired. The camera seen in Figure 6 has a draw of five feet, magnifying seven diameters with a seven-inch lens, and twenty diameters with a three-inch lens. The mosquito larvæ, Illustration No. 4, were magnified nine diameters; and, if I could have drawn the bellows back far enough to have used the seven-inch lens, the resulting photograph would have been even better.

Large specimens taken out of alcohol and placed in water, which is the denser of the two liquids, will float with a portion out of water, causing rings and highlights which would ruin the photograph. Such specimens, therefore, require a cover-glass to hold them down. With minute forms, the adhesion of the molecules of water seems to keep them completely submerged and the cover-glass can be eliminated. And further, this same adhesion seems to prevent the small amount of water required from rotating, and the specimen, which should be just barely covered, will remain perfectly still during the exposure.

For this work I use a cell improvised from a large watch-crystal, set in a rim of clay, seen in Figure 3.

Mosquito larvæ are less than one-quarter inch in length, and about half the size of the smallest

FIGURE 5 J. G. PRATT

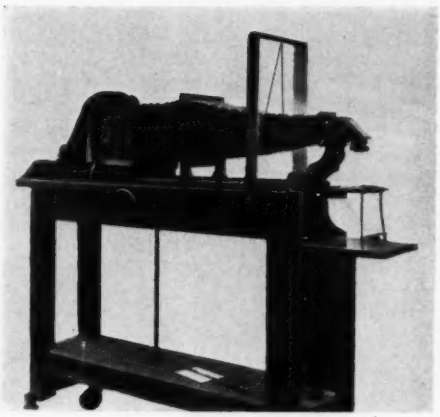

FIGURE 6 J. G. PRATT

needle. In beginning the experiment, I took a shot at one out of water just to see what would happen; but comparing the result with a specimen in water under a binocular, I found that the antennæ and hairy spines had clung to the body and gave no idea of the actual appearance of the insect. It was apparent, therefore, that it had to be photographed in water, and it proved to be one of the most "pernicious" specimens I ever tackled. If a specimen is dark, it can be handled to best advantage with a white ground; if light, or if involving any of the colors which would naturally be made light by the use of color-screens, a black ground can be used. Gray is not practical at high magnification, as the slightest amount of dust or other impurity either in the water or on the glass-support will cause great blotches, ruining an otherwise perfect photograph. But the specimen in hand was muddy green and semi-transparent, which offered no contrast to either white or black. This photograph required five hours of continuous experiment, trying out different plates, exposures, and developers with natural and with artificial lighting; but as the result was pronounced more than satisfactory by the Public Health Service for whom it was ordered, the effort was considered well expended. Patience, perseverance, initiative and thorough technical training are needed for success.

# Brady—The Civil War Photographer

C. J. GREENLEAF

THERE were some remarkably splendid men in the Union Army during the Civil War—men that I, as a boy-soldier, learned to admire and then love. High in rank among these was Matthew B. Brady, the photographer. He was not an enlisted soldier; he was a volunteer in the fullest sense of the word, and for a single great purpose—to make pictures of that terrible war. And it was amazing how well he did it, even under the most adverse conditions.

I regret that I have no good picture of him; so I must try and give you something of a pen-picture. He was about six feet tall, with no superfluous flesh, a human dynamo, ever busy, and as careless of danger as any man I knew while in the Army. His hair was red. His beard—chin whiskers only—and his mustache were of the same sanguinary hue. He was born in Cork, Ireland, in 1823, and was in his forties during the war. While he was still a small boy, he came to America, landing at old Castle Garden, and soon found a job in the house of A. T. Stewart, the great dry-goods merchant of that time. He was so bright, and did his work with such dispatch and correctness that, when he was about fifteen, Mr. Stewart made it possible for him to go abroad in the company of S. F. B. Morse, inventor of the telegraph, who was even then trying to make rusty wires tell any story desired by man.

During this trip, they paid a visit to the laboratory of Daguerre, who was striving to make pictures by the combination of chemicals and sunlight. That he succeeded, it is needless to say; and, when well made, I think that the daguerreotype has never been excelled for delicacy and fineness of detail. When young Brady visited him, Daguerre announced with great pleasure that he had just made a picture of his sister, with the very short exposure of only ninety seconds, in the sunshine!

This visit decided Brady's life-work. Returning to New York, he soon had a studio on Broadway, and later opened one in Washington. Just as he was fairly established, Fort Sumter was fired on and the great war soon came. It was a season of doubt and sadness to almost

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every person in America. Not so with Brady, To him it was filled with opportunity.

Mr. Lincoln visited Brady almost as soon as he came to Washington, and Brady made some of the best pictures of this President that were ever made. A strong friendship grew up between the two men. Through Mr. Lincoln, and during the time of these early war-days, Brady became acquainted with many of the men who were destined to take a part in the coming struggle. Lincoln gave him his ready aid and, in this manner, Brady came to know Secretary Stanton. Even this brusque officer became interested in the red-headed Irishman and his project. So, even before the people realised that a great struggle was coming, Brady was ready to begin operations.

He procured his supplies from the firm of E. & H. T. Anthony, of New York, of which firm some of the oldest photographers in the country may have bought their supplies. I can bear witness that I paid this house many good dollars for goods after the war was over. Brady never could have shipped his goods through the lines had it not been for the friendship of Lincoln, Stanton, and Allen Pinkerton, Chief of Detectives.

I think that I took a keener interest in this man and his work than the average soldier. It seemed so wonderful that he could get results under the terrible strain to which he was subjected, and I soon noticed that he never hesitated to go anywhere if there was a picture he wanted. I think the fact that I spent some fifty years working a camera almost constantly, beginning in 1868, as soon after I was discharged from the Army as I could earn enough money to buy a tintype outfit, was all owing to my admiration of Brady.

Of course, Brady used the wet process, as I was compelled to do for many years before the dry method was perfected. And that wet process was one of the most difficult things that I ever attempted. It did seem as though that bath and collodion would go wrong "just because" —. Just when everything was working fine and the next customer came in, there would be nothing but fog and failure. If this was the case in a fairly well-equipped gallery, with quiet, peaceful surroundings, what must it have been on some great battlefield, with dead and wounded men lying all about, guns roaring, cavalry and artillery horses charging down upon you, foam-flecked and under the lash!

Let me describe this wet process as briefly as I can, so you may know something of the trials that this man had to overcome; and yet he made many pictures that were real pictures rather than cold photographs! The negatives were made on glass. Gelatine films were unknown at that time. This glass had to be very clean, or the negative would be defective. Then this glass had to be flowed with collodion, made by dissolving gun-cotton in equal parts of the best ether and alcohol, with some salts added to give desired results. When the plate had been flowed with this collodion, it had to be placed in a silver-bath. This, in turn, had to be made from pure water in which nitrate of silver had been dissolved, about forty to fifty grains to the ounce of water. We were compelled to make this silver-nitrate by "cutting" silver-coin with nitric acid. Immersed in this bath, the plate would become a rich, creamy color. Then it was removed and placed in the plateholder and exposed at once. If the plate dried, failure followed. It took from ten to fifty times as long an exposure as the modern dry-plate.

Then again, the plate had to be developed at once and fixed with hyposulphite. None of these operations could be delayed except for a little time, for, if the plate became dry, it was useless. Next, the plate had to be dried and flowed with some hard varnish in order to protect the delicate film, for it was very different from the hard film of the present dry-plate. Brady had to carry out all of these operations—requiring the greatest care and steadiness—under the trying conditions that I have already mentioned.

Then the prints had to be made on albumen paper, paper coated with the white of eggs as indicated, dried, fumed with ammonia to make sensitive, exposed under the negative, washed, toned, and fixed. This recital may seem somewhat tedious to the average reader, but it cannot be nearly as trying as the operations themselves.

Now let us go back to Brady. All of his material had to come from a distance and be smuggled through the lines as best it could, the vehicle rattling over rough roads, often at breakneck speed, with mud to the hubs. He had to ford rivers, bank full, with six-mule teams bearing down directly upon him, often with a wedge of artillery wheeling for action and cavalry horses just missing the camera. Then his own horse would sometimes wonder what it was all about and set out in order to find out. Once I saw him scatter Anthony goods all the way from our lines to, and into, the camp of the Confederates. Everything was very crude and heavy as compared with the outfits of the present. The tripod was big and strong enough to hold a man, as well as the heavy box. The lens was large, almost like a stove-pipe, a slow worker—everything rough and crude. Moreover, Brady took his life in his hands every moment when he was at work, and he was forever busy. The



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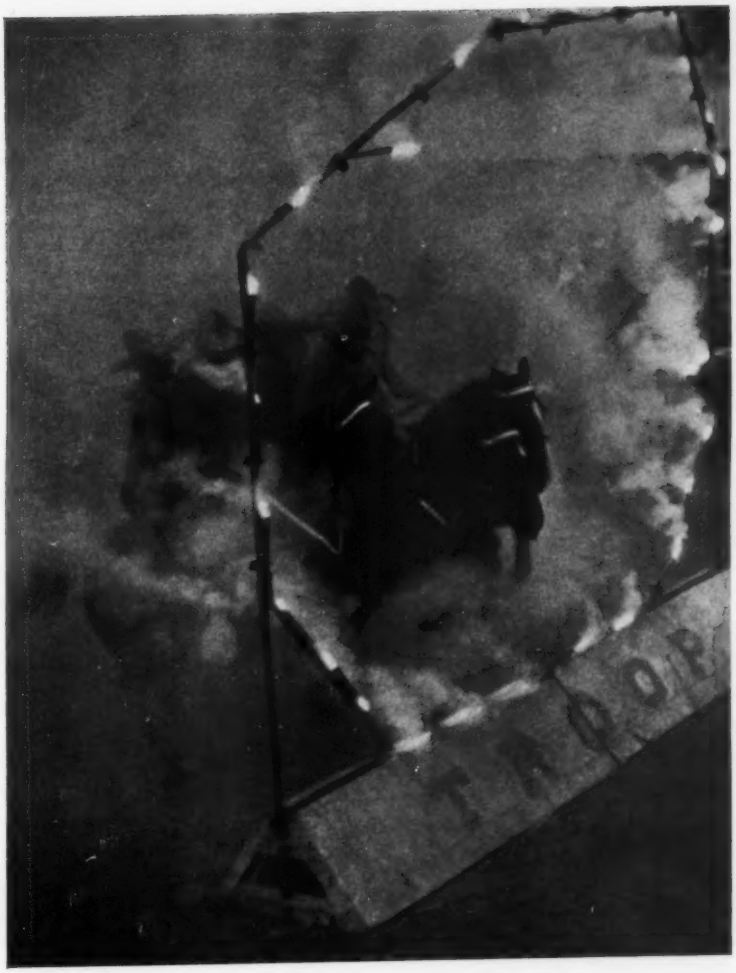

"SMOKE-EATERS"
HAROLD W. COLE
HONORABLE MENTION—PICTURES OF ANIMALS

enemy swore that they would "get" him, and, when they saw the reflection of his lens, they ever tried to "draw a bead" on the outfit.

Now let me tell you a little about the wagon used. The soldiers used to ask, "What is it?" when they first saw his wagon; so that it finally became the popular name among the soldiery—"The what-is-it wagon". It looked somewhat like the one the country-butcher used as he drove from farm to farm to supply his customers. A step was attached to the rear and below the wagon-floor. A door opened from the back and was carefully fitted to exclude light. This door came down over the step, which was boxed in at the sides, making a sort of well in the body of the wagon. One could use plenty of light, if it were yellow, as this did not fog the wet plate.

A word as to Brady's uniform. As I have stated, he was not a soldier in the employ of the Government, so he wore what he pleased; and he was pleased to wear a straw hat and a long linen duster, summer and winter, as far as ever I saw. Heavy boots—and he was ready for anything! I once saw a small hole in the top of his straw hat and a little lock of red hair at the opening, looking like a soldier in red uniform on guard. As far as I know, this wonderful man came through the four long years without a scratch or wound, and I never heard that he was sick or needed a doctor's care. He was usually civil to the soldiers, but he had no time for their horseplay or to chaff with them. He seemed to treat officers and privates about the same, and, when making groups, he ordered all of them about as he pleased. And the officers of the highest rank obeyed him.

As far as I know, Brady never left the Army of the Potomac while at his work. He seemed to have others at work all along the far-flung lines that extended away beyond the Mississippi on the West to the Atlantic on the East; but he ever seemed to be with the Army of the East, and here his best work was done. When the war closed, he had made something like 10,000 negatives, many of them duplicates; for it was his custom to make two of all views that he thought worth while. He had expended all of his money in this great work, he owed the Anthonys a large amount for material, and he had nothing but his stock of negatives. Some of this financial stress may be laid to his poor financial skill; but he never seemed to have time to sell or barter any of his pictures. I cannot remember that I was ever asked to buy any of them, and I never saw them on sale while in the Army.

After long delay, the Government paid him $25,000 for one set of negatives; but this did not pay his debts, and he had nothing to begin business with after those long years of labor and danger. Like many others who went through that war, he was broken and worn out, his life-work done and over, his splendid energy gone. Some time in the nineties he died in a New York hospital, poor, broken-hearted, and forgotten. It was terribly sad, and I have never ceased to remember this brave man who did so much to write the history of that great war in vivid pictures.

The second set of negatives passed into the hands of the Anthony firm as payment on account. They were kicked about and neglected for many years, until someone saw them and recognised their value. They were cleaned and retouched and became the central figure of interest in a really great history of that war.

I have seen camps and road-marches by the score that Brady pictured and that I remember well; but I have never been able to find the small, sixteen-year-old-soldier that was likest me. Someone has suggested that he made photographs at the front, where there was real danger and, therefore—well, well!

I fear that this little history is growing too long for Mr. Editor; but I find that everyone who has ever heard of Brady is eager to know about this brave man, and the time will soon come when there will be no living witnesses of his bravery and skill. So allow me to close with one incident that showed his remarkable nerve in a trying case, it seemed to me.

When I enlisted I had no idea as to the regiment or the army in which I might be placed; but it happened to be the 24th Michigan, as I enlisted from that State. Later this regiment became one of the five regiments forming the famous Iron Brigade. It is a part of history that in the first day's fight at Gettysburg, this regiment was nearly wiped out of existence, and that it lost *more* men than any other Union regiment —*not* the *largest per cent.* of men. That honor belongs to the First Minnesota. They had but a handful left; but every man in both regiments was either killed or wounded. Yet Brady had the nerve to go to that terrible scene early the next morning, and, while many of the wounded were still alive and calling for water and aid, to make some very good negatives of the piles of dead men. And they are as well photographed as many others who were in far more favorable conditions. I confess his nerve was better than mine, for he worked with the terrible realities; whereas I have never looked at the pictures a second time.

[Mr. Greenleaf is making good his promise that he would give our readers some articles of photographic as well as historic value.—EDITOR.]

# Elimination of Negative-Grain in 35-Millimeter Film

B. LEITNER

WITH the advent of the new miniature precision cameras which use 35-millimeter kinema negative-film, the problem of negative-grain has assumed no little importance—at least, to the discriminating amateur. Very highly corrected anastigmatic objectives have been fitted to these cameras—especially in the Leica—and those who know something of optics realise that the optical properties and advantages of these objectives cannot be duplicated in larger lenses. Nor can the flexibility, simplicity, and low operating cost of these fine cameras be overlooked.

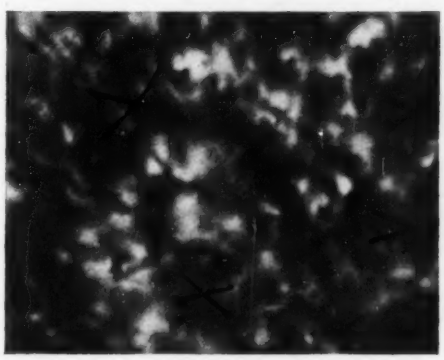

FIGURE 1 B. LEITNER

*Eastman Panchromatic Motion-Picture Negative developed in a low alkali content glycin developer and magnified seven thousand diameters. Note the difference in the character of the aggregations. A very objectionable grain is given by this negative.*

The effect of grain in enlarging these small negatives to ten or more diameters tends to degrade the true excellence of the image in a manner similar to a coarse halftone screen—though more unpleasantly. This is true especially if panchromatic negative film is used; and unless this is overcome, it may be preferable to revert to the old "five by seven" and "eight by ten". As for me—never!

Having invested two hundred and fifty dollars in a complete Leica outfit, I decided to solve the problem or else—! I am satisfied that I have.

I retired to the St. Louis Public Library, where I pored through ponderous technical tomes. I emerged with a lot of formulas and a sentence from a monograph of the Eastman Kodak's Research Laboratory publications: "The size of the individual negative-grain is affected only to a slight degree by different developers, and is specific to the type of sensitive emulsion"—which destroyed my faith in them.

I developed several strips of film in both ordinary developers and those concocted to give finer grain, and then gazed long and sorrowfully at them through the microscope at a magnification of nine hundred diameters. Yes—E. K. Co.'s expert was right; there was very little difference in grain-size—but wait! Ha! Aggregations!

I noted that aggregations of individual grains produced by different developers were larger and more irregular in developers having a comparatively large per cent. of alkali. I then betook myself to complete seclusion—armed with a slide-rule, books of developer formulas, and rolls of panchromatic, orthochromatic, and positive film.

I emerged two days later covered with stains and hypo, no film, three micro-photographs, and lots of conclusions.

*First.* Grain-size is proportional to speed of emulsion. Panchromatic film of same speed-rating as orthochromatic film gives larger grain-size because it must be hypersensitised to a greater degree to balance the screening effect of the color-sensitising dyes. It is relatively a superspeed emulsion.

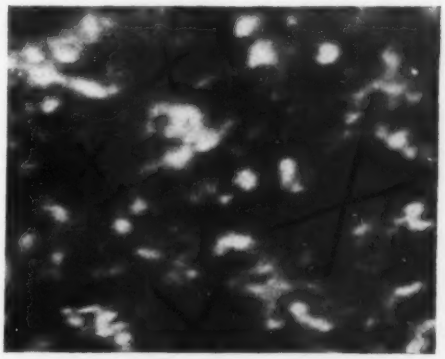

FIGURE 2 B. LEITNER

*This microphotograph shows Eastman Panchromatic Motion-Picture Negative developed in Rodinal, and magnified seven thousand diameters. A special effort was made to delineate the aggregations of individual grains instead of the individual grain. In actual practice a very objectionable grain is given by this negative.*



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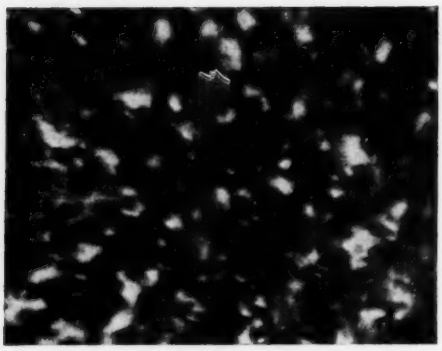


FIGURE 3 B. LEITNER

*Eastman Panchromatic Motion-Picture Negative developed in the formula given in the article and magnified seven thousand diameters. Note the uniform distribution of aggregations. This negative gives no objectionable grain even when enlarged up to fifteen diameters.*

*Second.* It is the aggregations of individual grains and not the individual grain which causes granularity upon enlargement. The size of these aggregations can be controlled by different developers of low alkali content.

### A Fine-Grain Formula

This formula will give an imperceptible grain on Eastman panchromatic motion-picture film when enlarged ten to twelve diameters:

| | |
|---|---|
| Metol | 5 grams |
| Hydrochinon | 1 gram |
| Sulphite | 50 grams |
| Bromide | 1 gram |
| Glycerine | 3 cc. |
| Water to | 500 cc. |

Fully-exposed negatives, thirty-five minutes at 65° to 70° Fahrenheit. This is a clean-working developer; but the film must be handled with extreme care to avoid finger-prints on the finished negatives. The delicate action of this developer is easily upset by the chemicals present in perspiration. I dry my hands thoroughly and then dust them with powdered talc, or, in hot weather, I wear surgeon's rubber gloves. A fresh fixing-bath should be used and the film hardened in a two per cent. formalin bath (fifteen minutes):

| | |
|---|---|
| 40% Commercial formalin Solution | 22 parts |
| Water to | 20 parts |

This hardens the gelatin to such a degree that water-marks can be rubbed off with cotton without injuring the film.

With the formula given, no objectionable grain is evident at high magnifications using panchromatic negative film. Orthochromatic film gives still finer grain. The film-strip should be dried quickly. Compose the picture accurately in the viewfinder; that is, trim the picture before you make it, in order to eliminate unnecessary enlargement. This applies not so much for grain as for image-quality. "Contact quality" can easily be obtained from these tiny negatives if care and cleanliness are observed.

# The Photographic Adventures of Bert and Ray

## VII—Ray Makes an Enlarger

NEIL WAYNE NORTHEY

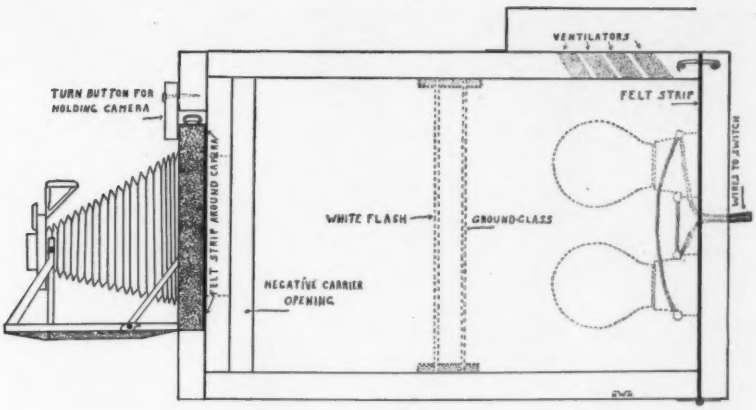
TRUE to plans, when Wednesday night arrived, Bert went early to the workroom in the basement of his friend's home, where Ray had promised to have everything in readiness to make their first enlargements. There is a fascination about making prints; but it hardly compares with the attraction of enlarging. Always there is a certain curiosity regarding the half-visible details in the small negative, and a desire to reveal them, which nothing but an enlargement will satisfy.

Bert had been wondering how Ray would solve the problem of an enlarger as he had promised. Although he felt sure that his friend would be equal to the task, he was hardly expecting to see the sight that met his gaze when he entered the room. He found Ray standing by the workroom-table, on which rested a black, box-like affair, to the front of which was attached Bert's Kawee camera. Out in front was a wide board that had been fastened perpendicularly to the wall, and on it Ray had secured a large square of white cardboard with thumb-tacks. As Bert entered the room, Ray switched off the light, thus revealing on the cardboard an enlarged view in true picture-show fashion.

"So that's what you borrowed the Kawee for", said Bert.

"Yeh", replied Ray. "You see when the back is removed, the camera fits perfectly flat against the front of the box and is light-tight. I tacked a strip of felt around the box for it to rest against."

While Bert examined the enlarger, Ray explained its various features in detail. It was




THE ENLARGER RAY MADE NEIL WAYNE NORTHEY

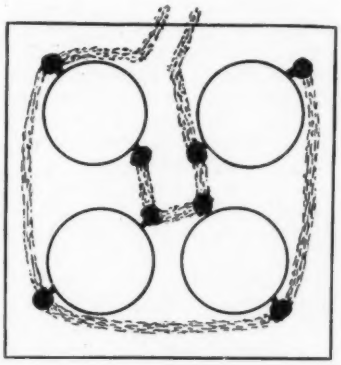
ten inches square inside, by eighteen inches long, and was made of one-inch material.

"I made it plenty large enough for several reasons", said Ray. "In the first place, it allows room for four 50-watt bulbs, which give more even illumination than one large one would. Then, with more space, the thing doesn't get so hot inside. I tried placing a heavy piece of groundglass between the frosted bulbs and the negative, but found that it didn't diffuse the light enough. I could see four bright spots on the screen and knew that would never do. So I bought a piece of what is known as 'white flash', which has a sort of milky appearance, and, boy, it works fine! I left the groundglass in and placed the white flash about an inch in front of it, which gives double diffusion—three, in fact, counting the frosted bulbs. I stained the front inside black like the outside, but left the back inside natural, so that it would act somewhat as a reflector.

"I hinged the back so that we can open it in case we burn out a bulb, as otherwise it would be necessary to take out the diffusing-glasses. This strip of felt around the back edge for the back to close against makes it light-tight in case the back dries out and warps from the heat. I had quite a time figuring out how to make the ventilator, but finally decided to bore a half-dozen holes in the top and cover them with a tin box with the back side open. You see, the holes were made with a decided slant toward the closed end of the cover, so that no direct light can shine up through them.

"But the hardest thing to do was to make a satisfactory negative holder—one that would hold either plates or films of various sizes. What do you think of it?"

Bert inspected the negative-carrier thoroughly. It consisted of a frame of one-inch material, the outside dimensions being two inches narrower than the outside of the box one way, and the same size as the box the other way. The inside opening of the frame was made with a deep groove, and into this was fitted a kit 8 x 10 inches, made of quarter-inch cardboard, having a grooved opening in it the size of the largest negative from which enlargements were to be made. In the kit opening was a piece of clear glass upon which the film and mask rested, and over



METHODS OF WIRING LAMPS
NEIL WAYNE NORTHEY



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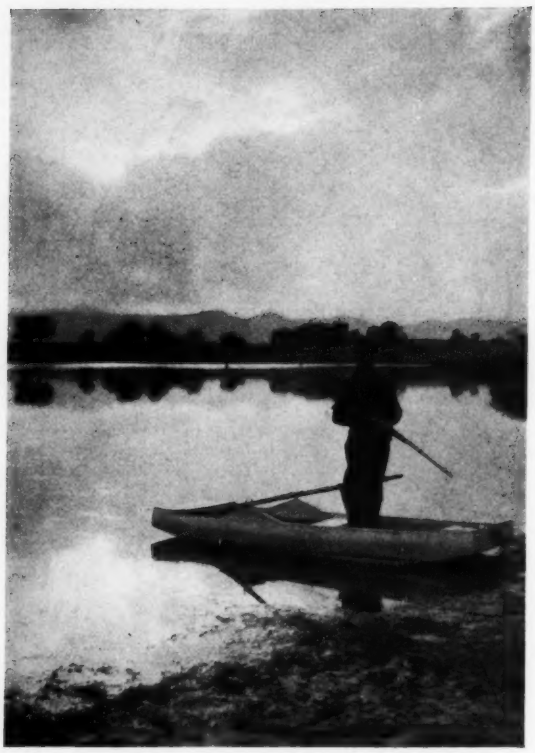

THE DUCK HUNTER—BERT'S PICTURE

NEIL WAYNE NORTHEY

the negative was placed another piece of glass 8 x 10 inches, or the same size as the kit, the groove for the kit having been made deep enough to allow for the thickness of the glass and then some, in order that when spring holders of brass were fitted there would be room to countersink them so that they would not protrude above the surface and interfere with the sliding of the carrier in its slot.

"That's a fine idea", said Bert, after he had examined it.

"If we ever want to enlarge a portion of a large negative, we can simply make another cardboard kit with an opening in it for any size we want", explained Ray. "The whole thing cost me just $1.30 without the bulbs, which I can borrow from around the house whenever we do enlarging."

"Let's see if it works as well as it looks", said Bert.

The developing, rinsing, and fixing trays were placed in their usual order on a board across the darkroom sink, except that, as larger trays were needed than for developing and printing, Ray had borrowed some large enameled baking pans from his mother. Instead of clear water in the center tray for rinsing, between the developer and fixer, a half-ounce of glacial acetic acid was added to forty ounces of water to act as a short stop.

When the solutions were ready, Ray placed a negative that they had chosen for the first enlargement in the carrier with its dull side toward the lens and upside down so that it would be right side up on the screen to make focusing easier. The darkroom light was turned off and the lights were switched on in the enlarger and ruby-light.

To obtain an image the size wanted, the enlarger, with the camera attached to the front

THE BEAVER-DAM—RAY'S PICTURE NEIL WAYNE NORTHEY

of it, was moved forward or backward on the table and then the image was focused on the white cardboard screen in front by racking the lens forward or backward.

"How much time do you think we should give it?" asked Ray.

"I have no idea", replied Bert. "Suppose we cut a strip of enlarging paper and make a test exposure."

"Luminous thought", said Ray. "We can spare some from one side of the paper, anyway, because this negative doesn't enlarge to quite the proportions of the paper."

After a couple of trials it was decided that twenty seconds was the correct time. From Bert's Ramstein Simplex filter set, Ray selected a filter of the deepest tint and capped it over the lens. This permitted him to see the location of the image, yet prevented fogging the enlarging paper while he fastened it in position on the board with push-pins. When all was ready, the filter was removed and the exposure made.

It was a late hour when the boys suspended operations and put the dozen enlargements they had made to washing. There had been many test strips made between exposures, which required considerable time, but it had been an interesting evening.

"I wish there was some way to simplify the matter of estimating the exposure", said Bert, while the enlargements were washing. The boys were putting away material, washing trays, and arranging a large square of muslin upon which the pictures were to be dried face down to eliminate curling somewhat.

"Ditto", said Ray. "Perhaps if we put our heads together, we can work out a system. It takes as long to make a test strip as it does an enlargement, and sometimes we have to make two or three. Even after we find the right amount of time for a given negative for a given grade of paper and for a given rate of enlargement, if we decide to make a larger or a smaller picture, or if we change to a different grade of paper, the whole thing is upset and we must make another test. Naturally, the greater amount a negative is enlarged, the more time will be required, because the same amount of light must spread over a larger area. The question is, How much? Then there is the matter of the size of stop used in the lens, the kind and formula of developer to use for different papers, not mentioning several other things that need to be simplified and improved, like the method of holding the paper on the board during exposure. Wow! my fingers are surely sore from sticking in those push-pins so many times."

No doubt Ray was somewhat relieved after running off this train of thought; but it saved Bert the trouble of expressing the same words. It was an indication that both were aware there was an opportunity to do some original thinking and work which would advance them in the photographic art.



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"I believe after we have settled on a particular brand of paper and developer, and have become sort of 'standardized', so to speak, in the matter of manipulation, the whole thing will be much simpler", said Bert. "Of course, if we are to get the most out of our negatives, we must use a variety of paper grades to suit them; but I believe we can in time work out some sort of speed-chart for the different papers and the various degrees of enlargement, which will be a big help."

With the pictures on the drying-frame, the next matter to occupy the attention of the workers was the selection of the prints that were to be entered in the PHOTO-ERA Beginners' Competition, as they had planned.

"I believe I'll send this view of the beaver dam", said Ray; "the sky is rather bald on account of my not having had a ray-filter; but the ripples on the water sort of make up for it. I gave that negative two exposures of one twenty-fifth of a second each at F/8 in order to give it enough time without blurring of the rippling water. It seems to have worked fine."

"I'll send this one of the duck-hunter", said Bert. "I happened along just as he came ashore, and he obligingly posed for his picture. It was made directly against the morning sun, which was behind the clouds at the time. I would never have dared to attempt such an exposure without the graduated sky-filter. You see, it held back the strong light from the sky and gave the ground light a chance to act. Without the help of the filter, I would have got little more than a silhouette, shooting, as I was, at the shaded side of the man. But I wanted the sky-effect and the reflection."

Ray picked up one of the drying prints and admired it for a moment. "I like this one we made together better than either of the ones we're sending", he said.

"Yeh, so do I," said Bert, "but the agreement was that each of us was to send what he thought was his own best print".

"Maybe we can enter this one together in a later competition", suggested Ray.

"Mebbe so", said Bert.

"What do you say if we offer a year's subscription to the reader who writes us the best letter criticising our pictures?" said Ray. "We might get some tips that would help us to improve our work."

"And a six-months' subscription to the next best", added Bert. "We'll see which of our pictures gets the most favorable comment."

*(To be continued)*

(NOTE.—We have reproduced herewith the two pictures which Bert and Ray entered in the January Beginners' Competition. Do you think you have one that is better? If you have not already sent yours, do so before January 31. Then watch the April number of PHOTO-ERA for the prize-winning pictures. In the meantime, Bert and Ray want to know what you think of their pictures, and which one you think is the better. The reader who sends in the best letter before February 28, 1930, stating which picture he thinks is the better, with a criticism of both, will receive a year's subscription to PHOTO-ERA MAGAZINE. The writer of the next best letter will be given a six months' subscription. Bert and Ray will appreciate learning about any mistakes they may have made, with suggestions regarding how their pictures could have been improved. Address, Raybert Pictorialists, PHOTO-ERA MAGAZINE.)

# Experiences in Amateur Aërial Photography

E. J. ROY

THE local Chamber of Commerce thought that some nice aërial photographs of our beautiful city might help to sell Kankakee, Ill., to outsiders, and the writer presented himself as, perhaps, a worthy candidate for the job of making them.

Now, aërial photography is a subject which had greatly intrigued me for some time and I made some arrangements with the pilots at the flying field to go fifty-fifty with me—they to do the flying and I to make the pictures.

My stock of cameras was limited, indeed, and our first attempts were made with a 4 x 5 plate camera, using panchromatic plates. We had been waiting for the best weather possible; and, after a preliminary flight—on what was to me a very poor day in the air—we returned. I was rather disgusted with the blue haze we encountered and told the pilot so. "Well", he replied, "you'll do a lot of flying before you find a better day for visibility". Up we went again, this time shooting a few pictures. Not so good: blur bad, and a perplexing, unexposed area on each plate. It finally dawned on me—the bellows had collapsed. Well, one one-hundreth of a second was certainly not fast enough; and, furthermore, bellows in the air are not much.

Then we paid Chanute Field at Rantoul, Ill., a visit. Lieutenant Peterson was the officer in charge at the time we visited, and he was very kind to me in giving me much information about aërial photography in general.

As our little monoplane cleared the hangars

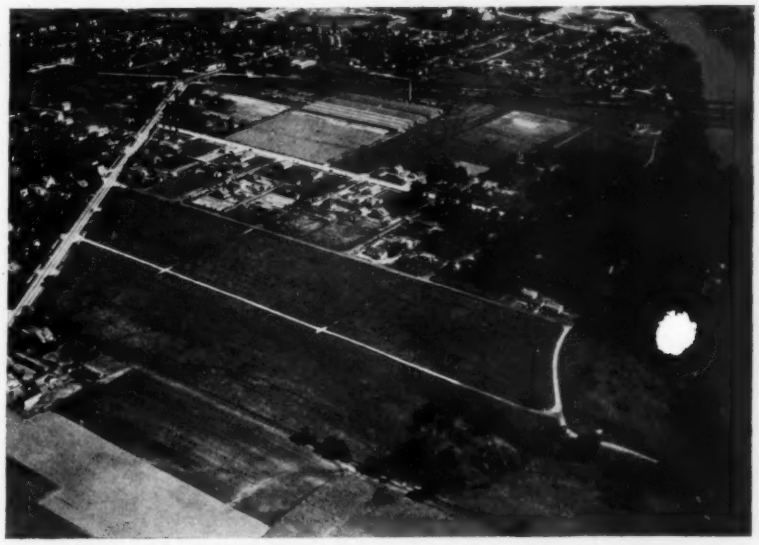
KANKAKEE GUIDES THE AVIATOR

E. J. ROY

of the Army Air Corps School, it occurred to me that the Army is doing more for the civilian than just to supply a ready means of protection, and I felt much more confident about the work in hand—I knew, at least, the basic requirements.

I decided that the proper thing was a Graflex—in view of the fact that an aërial camera was out of the question. My 3¼ x 4¼ series B Graflex, which has very little bellows exposed, might provide negatives which would bear enlarging to, say, 6½ x 8½. We had pictures to make of several buildings and plants. I filled my new magazine filmholder with panchromatic plates. I attached a direct-vision finder and wedged a small bolt between the bed of the camera and the rack, after focusing a distant object from the top of my building.

I was forced to make all pictures from the front cockpit on the Waco plane we were using, as the stick could not be readily removed from the rear cockpit. This made it very difficult to work, as the angle between the tail and wing surfaces was only slightly more than the working-angle of lens and plate used. As we started to circle a prospective picture, I motioned that we were too high; and, as we came down in a slow glide, I got to my knees, looking through the direct-vision finder. I knew we were getting the whole block instead of the one building we wanted; but I released the shutter, anyway. We continued to circle at about the same altitude and I continued to expose plates. It became very apparent that we would need some means of communication, as we were photographing everything at too great a distance. Oh! for a ten-inch lens! When we got back I told the pilot that we were too high and that we must get closer for such small subjects. "Well", he



THE OUTSKIRTS OF THE CITY

E. J. ROY



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replied, "we were just a bit lower, as it was, than I care to go again; and, if that motor had misbehaved, we wouldn't be here talking about it". When I developed the films, I found that about 30 per cent. had movement blur and the others were pretty fair, except that another 30 per cent. had what appeared to be a blur on only just one small part of the negative. I couldn't conceived of how part could be blurred and part not, except that there must be a vibratory action on the face of the film caused by the high wind velocity striking the camera and producing a singing vibration which was somehow transmitted to any part of the film which was not securely held in place by the septum. Figure one shows this defect. If Graflex rollfilm could be procured in the panchromatic emulsion, the tension supplied by the Graflex rollholder would, I think, eliminate this. My plates, made with the slow shutter-speed on the 4 x 5 Conley, showed so much blur that it is impossible to judge whether or not this vibratory action to film could be overcome by using plates.

On another occasion, I had a picture to make of a large stone-quarry about a mile in extent. The day was slightly cloudy. The ground was covered with great black patches, with the brilliant green of the new corn showing between. We arrived at our destination about 2,500 feet above the quarry. We had now a speaking-tube installed and I could at least tell the pilot what I wanted of him. Just as we were spiraling for our first shot, a great white cloud came along casting a shadow over the edge of the picture. I told the pilot to wait for the cloud to pass. This day I was to get my introduction to the air bump. As we circled the place waiting the whim of the atmosphere to clear our picture, we suddenly felt as if the bottom had dropped out. I looked back at the pilot and was reassured by a broad grin. Nevertheless, it dawned on me that I

OVER THE CITY E. J. ROY

FIGURE 1 E. J. ROY

ALONG THE RIVER E. J. ROY

might become disconnected from the plane at some future time while absorbed in picture-making, if there was nothing to hold me in. My expectations nearly came true. Just as the last wisp of vapor drifted away and we were all prepared to shoot, I poised on my knees holding the camera out over the side, the ship gave a tremendous lurch; something hit me on the nose and I nearly dropped the camera in an effort to keep in the plane. The pilot was watching me as I turned in surprise toward him. He shook his head, then grinned. Then I grinned, also—rather sheepishly I imagine. I told him I made the exposure just as we bumped, and so we started in and made it over. We always made several exposures of each subject, anyway. The next flight I made, there was a strap around me which just allowed me to get to my knees.

Here, then, are my rules for obliques at about 1,200 to 1,500 feet:

A panchromatic film or plate—plate preferred; since negatives to be enlarged have only two surfaces in place of six; as in the case of film-negatives, which must be placed between two pieces of glass in the negative-carrier of the enlarging-outfit. Also imperfections—optical—in the glass of the negative-holder are very annoying in enlarging film.

Other emulsions can be used; but why not panchromatic? A filter, I think, is essential, and the factors with other emulsions are so high.

A K-1 or K-2 gelatine filter between the cells.

A lens-speed of F/4.5, or at least F/6.3.

Develop negatives in concentrated developer.

Contrast and detail mean everything in aërial photographs, as everything is small and the entire picture-area is always subjected to the closest scrutiny.

Have the pilot put the ship into a slow glide just before you shoot, and don't hurry; but wait until the motor is turning as slowly as possible. Your pilot won't let the ship stall and spin.



XUM

ACROSS ILLINOIS FARMLANDS — E. J. ROY

He may spoil your shot by suddenly giving the ship a little sharper glide; but that shot can be made again. An exposure of not more than a 250th of a second should be given.

In conclusion: A speaking-tube to the pilot's ear means much to your pictures, and a strong strap around your body means much to your health. Licensed ships and licensed pilots are also best for aërial photography.

[In preparing Mr. Roy's helpful article for our pages, the Editor was carried back in thought to his own experiences in aërial photography while on active military duty at Chanute Field, Rantoul, Ill. The November, 1925, number of PHOTO-ERA MAGAZINE contained an account of the Editor's first airplane flight and his subsequent attempts to become an aërial photographer. Although he has been up a number of times since then, he has never had the same thrill as on that first morning, when he tried desperately to hold onto the camera, make a picture, and keep from falling out of the ship while a hundred-and-twenty-mile wind blew in his face. It was his "baptism of fire" in aërial photography and an experience that he will never forget.

Aviation and aërial photography have made such remarkable advances within the past four years that the Editor's training in 1925 is now considered to be out of date. Aërial cameras have been improved and photographic ships are better and more conveniently arranged for the photographer. Furthermore, the tremendous increase in commercial aviation has enabled many amateur photographers to go up in comfortable cabin ships and make pictures through the windows or by opening them for each exposure. We admit that this is much more comfortable, especially at the higher altitudes; but we still prefer the open ship for aërial photography at its best. There is something exhilarating about the blast of wind in one's face and the matching of one's skill with the movements of the ship, the release of the shutter at the right moment, just as the pilot almost stalls the engine to reduce vibration; and, finally the staying in the ship as the pilot "gives her the gun" to regain his lost altitude after the exposure. While making aërial pictures, we nearly always unhooked our life-belt, so that we might stand up and handle the camera with greater freedom; hence the need to be ready when the pilot "gave her the gun", or, in automobile parlance, "stepped on it". An airplane responds to the throttle as promptly as a motorcar—sometimes more so! There's a real thrill in it.—EDITOR. ]

# Oil Reinforcement—The Difference It Makes

CLARENCE PONTING

NO matter how carefully an exhibition-subject is chosen, and photographed, if the artist is at all critical there will be parts of the picture which do not satisfy. This may be due to incorrect color-rendering, excessive contrasts caused by the lighting, or the inclusion of objects which do not help the composition. It is, therefore, absolutely necessary to correct these defects either on the negative or by means of a control-process. Working on the film presents no difficulties to some photographers, who are able to cut and abrade the silver-image with impunity, where other less skilled workers would ruin the negative. Retouching also seems to be a thing which few amateurs can accomplish with success.

The only alternative left to the unskilled is the use of a control-process, such as bromoil, which permits additions to, or subtraction from the picture-image. Bromoil, unfortunately, is a process for the expert, and is apt to produce a grainy image in inexpert hands. A control-process which requires the minimum of skill, and is known to few amateurs, is the oil-reinforcement method, which will permit of sufficient control for most exhibition-workers and give an image which is free from the graininess of the bromoil. If the work is done moderately well, no evidence of control will be visible in the finished result.

As the name implies, the method consists in reinforcing the silver-image by means of an artist's oil-tube color, thus adding depth to shadows and toning down excessive highlights, or in deleting light-colored, unwanted objects.

The materials needed are few in number, and, unlike those required for the bromoil process, are inexpensive. A tube of artist's oil color to match the print, two five-cent No. 3 watercolor brushes—those used by children are quite good enough—a small bottle of linseed oil or poppy oil, and a handful of cotton provide the necessary materials. The bromide paper which gives the best results in my hands is Kodak White Royal, and the artist's oil color which exactly matches the image when developed with M. Q. will be found in Ivory Black. Other colors may be used for toned images; but the beginner should commence with a black-tone print, as this is more easily manipulated than those which have been toned.

Before attempting work on a print, the brushes will have to be cut in order to make them suitable for working the paint. This simply means that the hairs forming the point are cut off at right angles to the mount, making the severance at a point which will leave about one-eighth of an inch of stiff hairs above the mount.

There is no need to experiment on a waste print; for, if the work is badly executed, it can be removed in a moment and another application made. Before the print can be worked upon, it must be prepared to take the oil color. The enlargement should be placed on a piece of white paper considerably larger than the picture, in order to obtain a white surround. Print and white paper are then firmly fixed to a drawing board by means of drawing-pins, one being pushed through each corner of the print. The object in providing the surround is to show the effect of the working as it will appear when the print is finally mounted on a light-tinted support. In the center of the now tightly-stretched print, place a few drops of the poppy or the linseed oil. The exact quantity is immaterial, but I find about six drops sufficient for a 8 x 10 enlargement. Taking a tuft of cotton the size of a walnut, rub the oil evenly over the surface of the enlargement until the whole presents an oily appearance. With another clean tuft of cotton now, rub off all the oil. The surface will then present a silky sheen, and sufficient of the oil will remain in the pores of the paper to allow the paint to be smoothly applied. When linseed oil is used, the surplus must be thoroughly removed by a second swab, or, eventually, the print will assume the appearance of an aged engraving which has been yellowed by time. This effect, although unpleasant in most pictures, considerably adds to the appearance of certain subjects. As poppy oil does not yellow with age, I always use and recommend this medium, although the working with linseed oil is smoother and is more easily applied.

In order to show the effect produced by this reinforcement, I will describe the methods used to work up the finished picture from the untouched print seen in the first illustration. Let me enumerate its defects. The sunlit cottage is too contrasty, and white, and lacks gradation. The patch of sky seen through the trees in the top left-hand corner is irritating, and attracts the eye. The two supports of the netting, and the netting itself are unwanted. The absurd caudal appendage of the dog, due to a highlight, must receive attention; while the woman's skirt is almost of the same tone as the background.



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FIGURE 1 A LAKELAND HOME CLARENCE PONTING

Using a piece of glass for a palette, squeeze onto it a bead of the oil color. Take the two brushes and thoroughly charge one with as much paint as it will take up, *merely touching the hairs of the other on the pigment.* Call these brushes No. 1 and No. 2. Take No. 2 brush and twirl the cut end on a clean piece of the glass. Now test No. 2 on a waste print which has been prepared for work as previously described. It should deposit a decided halftone of color when applied to a highlight. Brush No. 1 will give a dense black when applied to the print. Commence the work by toning down any unduly highlights—such as the sky in my illustration—using No. 2 brush. If the brush is applied to these parts with a circular, rubbing motion, the pigment will be deposited perfectly evenly. If the tone produced is too dark, due to a heavy hand, it can be lightened by rubbing lightly with a tuft of dry cotton, or be entirely removed if vigorously applied. As the pigment is used up, recharge the brush. The removal of the posts and netting was effected by use of the No. 1 brush, applying sufficient pigment to darken them to the same tint as the foliage background. A final smoothing with a dry tuft of cotton completes this portion of the print. Still using this brush, deepen any shadows which need to be strengthened—such as the overhanging eave and the woman's dress seen in my illustration. The wall at the back of the dog is too evenly illuminated and should be darkened on the left, using No. 2 brush. The strong highlight around the dog's tail is also darkened by the application of pigment, using No. 2 brush which has been allowed to pick up a little extra paint.

When this working is completed, the attention is at once directed to the figures and cottage, owing to the removal of the conflicting lights.

FIGURE 2 A LAKELAND HOME CLARENCE PONTING

The cottage still remains too white, and in order to keep the lighting concentrated around the figures, a large portion of the wall was evenly lowered in tone. When a large space such as this, or the toning down of a sky has to be done on a print, the paint is applied by means of a tuft of cotton which has been barely touched on the color. The pad, if rubbed over the oiled surface, will apply the color very evenly. In my illustration it will be noticed that the curtains of the window are lighter than the wall. This can be obtained by working around the windows, or by darkening wall and windows alike, the paint being removed from the curtains by means of a soft india-rubber when the pigment is perfectly dry and hard.

No such work should be done on the print until at least a week after applying the color. Then, if it should be necessary to lighten, or remove small portions of the color, it can be done with a soft rubber.

I have had no experience with the American bromide papers, with the exception of Kodak White Royal, so cannot say how they would respond to this oil reinforcement. Having found the Royal ideal for the purpose, I have never tried other papers, English or foreign. I might, however, mention that the process is only suitable to prints having a decided mat surface. The oil fills in the minute hollows of such surfaces; and, although apparently all wiped off at a later stage, leaves sufficient behind to permit the paint being applied. Neither the oily paint or the oil itself will sink into the paper-support, since the gelatine resisting the oil makes it impervious.

Clean the brushes in gasoline before putting away. When working up, close to an outline, such as around the figures in my illustration. the brush edge is used, and not the square flat, as when toning down highlights.



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# Paper-Holders for the Enlarger

PAUL L. MILLER

WHAT better way is there to spend an evening than to make enlargements from your favorite negatives? In fact, any negative worth keeping is worth the time spent in making an enlargement from it. Enlarged, the prints make a better appearance when displayed in your album, and then there are the fine tonal values not shown in the ordinary contact print.

Further to enhance the beauty of the prints, they should have a large white border all round. Usually there should be more border at the bottom than on the sides and top. This border will help in making the black leaves of the album less conspicuous. All of us know that the black leaves of the album do not add any artistic touch to the display of our prints. If they did, the salons would demand prints mounted on black mounts instead of white. Why will not the manufacturers of albums wake up and give us something light-colored on which to mount our prints? Surely, there are enough of us who would buy this kind of album to warrant its manufacture. Until such time as these albums may be purchased, we must content ourselves with making large white borders on our prints, thereby hiding at least some of the obtrusiveness of the black leaves in the album.

To make these white borders around our prints, it is necessary to have some kind of paper-holder that will exclude all light from the edges of the paper. One way to make the borders is to mask the negative and project it on only a portion of the printing-paper. This method does not always work out very well and, at best, is a makeshift method. It requires cutting masks every time you make a print, when using only a portion of the negative. With the paper-holder the whole negative is projected. If only a portion of the negative is used, the projected image usually is several times larger than the paper being used. This large image enables

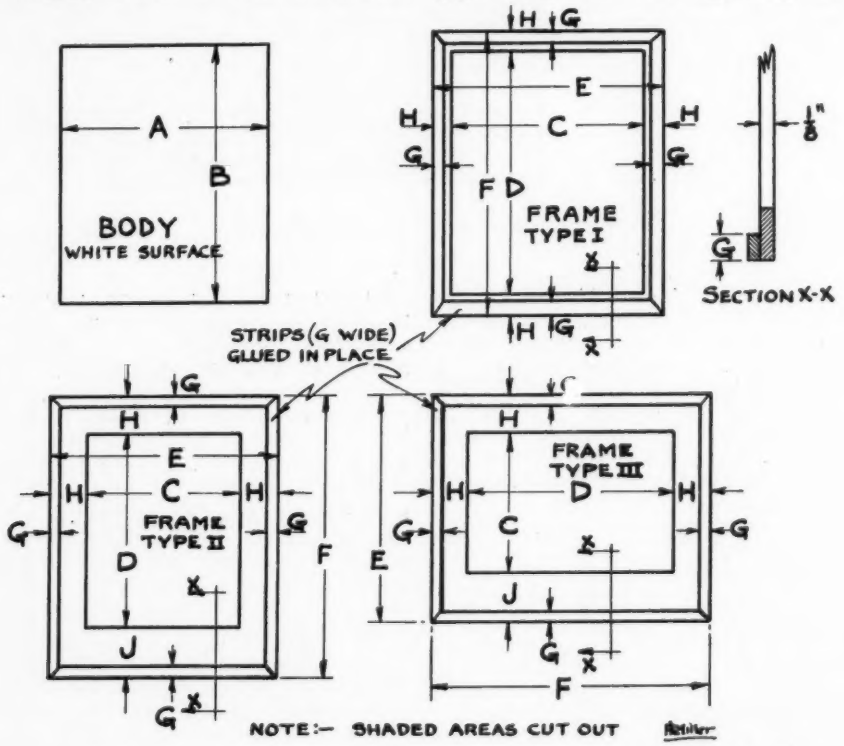



FIGURE 1 PAUL L. MILLER

| SIZE OF PRINT | BODY | | FRAMES | | | | | | | | SIZE OF BORDER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | TYPE | C | D | E | F | G | H | J | |
| 5x7 | 5 | 7 | I | 4 5/8 | 6 5/8 | 5 1/2 | 7 1/2 | 1/4 | 7/16 | — | 5/16" All Around |
| | 5 | 7 | II | 4 1/4 | 5 7/8 | 5 1/2 | 7 1/2 | 1/4 | 5/8 | 1 | 5/8" Top & Sides 5/4" Bottom |
| | 5 | 7 | III | 4 1/4 | 5 7/8 | 5 1/2 | 7 1/2 | 1/4 | 5/8 | 1 | |
| 8x10 | 8 | 10 | I | 7 1/2 | 9 1/2 | 8 1/2 | 10 1/2 | 1/4 | 1/2 | — | 1/4" All Around |
| | 8 | 10 | II | 6 1/2 | 8 1/4 | 8 1/2 | 10 1/2 | 1/4 | 1 | 1 1/4 | 3/4" Top & Sides 1" Bottom |
| | 8 | 10 | III | 6 1/2 | 8 1/4 | 8 1/2 | 10 1/2 | 1/4 | 1 | 1 1/4 | |
| 10x12 | 10 | 12 | I | 9 1/4 | 11 1/4 | 11 | 13 | 1/2 | 7/8 | — | 3/8" All Around |
| | 10 | 12 | II | 8 | 9 1/2 | 11 | 13 | 1/2 | 1 1/2 | 2 | 1" Top & Sides 1 1/2" Bottom |
| | 10 | 12 | III | 8 | 9 1/2 | 11 | 13 | 1/2 | 1 1/2 | 2 | |
| 11x14 | 11 | 14 | I | 10 1/4 | 13 1/4 | 12 1/2 | 15 1/2 | 3/4 | 1 1/8 | — | 3/8" All Around |
| | 11 | 14 | II | 8 1/2 | 10 3/4 | 12 1/2 | 15 1/2 | 3/4 | 2 | 2 3/4 | 1 1/4" Top & Sides 2" Bottom |
| | 11 | 14 | III | 8 1/2 | 10 3/4 | 12 1/2 | 15 1/2 | 3/4 | 2 | 2 3/4 | |

FIGURE 2 PAUL L. MILLER

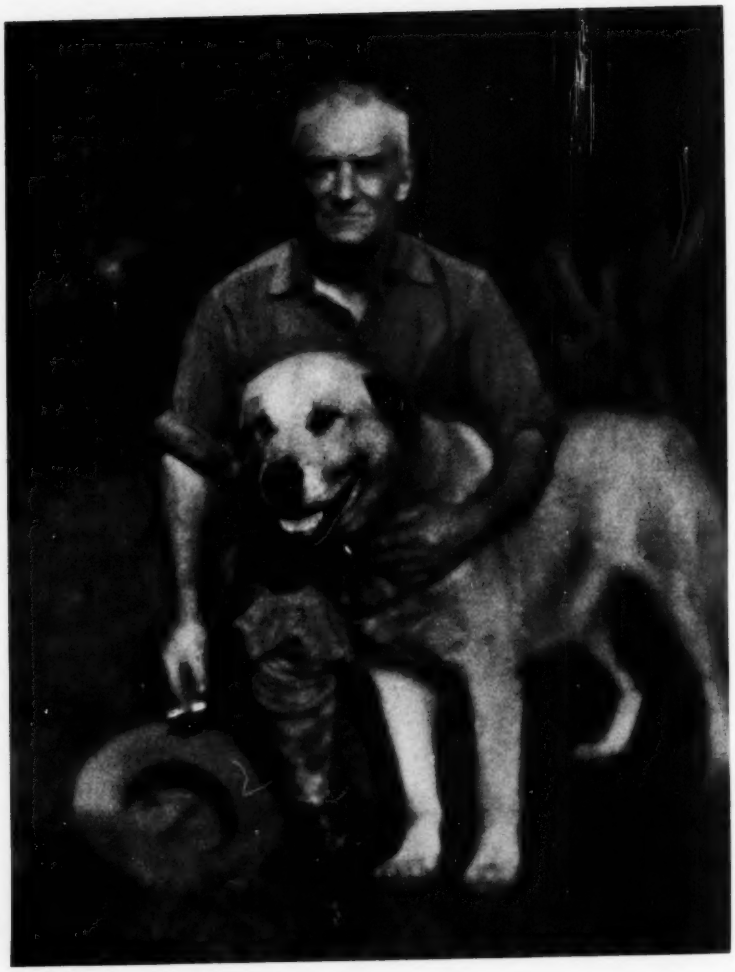
you to pick out easily the portion of the negative wanted for printing. While placing the holder and paper upon the easel, the yellow safety screen must, of course, be placed over the projector's lens. Before printing, however, it is necessary to focus the image on the holder alone. The holder, which will be described, keeps the paper about one-eighth of an inch away from the easel or table, depending upon the type of enlarger used. After focusing, the paper is put in the holder and the exposure made, without any fear of light touching that portion of the paper protected by the holder.

To make the holders, few materials are needed: cardboard for the holder, pencil and rule, a good glue (Le Page's liquid), and a sharp knife for cutting. The cardboard should have a white surface to make it easy to project upon. If of another color, the body of the holder should first be covered over with white paper.

Making the holders is simplicity itself, as only two main pieces are used at one time. If satisfied with one size border, only two pieces will have to be made for each size of prints. If, however, more than one size border is required for one size of prints, several frames must be made for the holder. Usually, it is well to have three frames, one each for horizontal and for vertical prints with wide borders, and one for a narrow border. The reason for making a frame for each horizontal and vertical print having wide borders is that the bottom of the print is left with more border than either the top or sides. The even, narrow border is generally used on prints prepared to be sent out for sale.

The two pieces, body and frame, are made as follows: The body is one piece of cardboard, cut exactly the same size as the finished print. The frame for holding the body is cut somewhat larger and the center of it is cut out to accommodate the size border required. Around the edges of this frame, strips of cardboard are pasted one-quarter of an inch wide or more, depending upon the size of the holder. These pieces are so pasted as to allow the body to exactly fit between them. In using the paper, it is placed on the frame, emulsion-side facing the opening, and the body placed on top. The holder is now turned over, holding the frame and body together, and is placed on the easel.

The accompanying drawing and table of dimensions give the sizes for making the four most popular sizes of photographs. Variations of the dimensions given will either give you smaller or larger borders on your prints. The borders given, however, are the right proportions to suit the sizes of prints listed in the table.



CHINOOK
DOROTHY JARVIS
HONORABLE MENTION—PICTURES OF ANIMALS

# EDITORIAL

## "Crying Aloud from the Housetops"

AT the threshold of the New Year it is wisdom and good business to do a little introspection and retrospection. It is an appropriate time to look things over and to sum up the gains and the losses. We have all made mistakes and we have all had some measure of success. We have known the discouragement of failure in some things, and the exhilaration of success in others. We know fairly well just where we stand, if we are honest with ourselves. If we admit the truth, we have failed in many things to measure up to the promises we made to ourselves, if not to others. A year ago we may have announced confidently the things that we would do; but have we done them?

It is not our purpose nor our desire to assume an "holier than thou" attitude. We admit our own human frailties; and what we have to say in the following paragraphs we take to ourselves. It is not because we believe ourselves to be perfect but because we sense a common tendency that we take this opportunity to call attention to that which, we believe sincerely, weakens rather than strengthens the position which a product or a service holds in public estimation.

We refer to the increasing tendency among manufacturers, dealers, editors, contributors and interested persons in all industrial fields to over-praise and, perhaps, over-state the merits of a given product or service. Such phrases as "best in the world", "best in town", "best for the money", "leads the world", "ahead of every competitor" and so on, are, in most cases, not backed up by the facts; and no one knows it better than the general public.

Many years ago we happened to be walking along Third Avenue in New York City and came upon a little market which seemed to be literally squeezed in between two large mercantile buildings. What caught our attention, and then made us smile at its obvious absurdity, was a sign over the tiny entrance which announced that here was "The Best Market in the World". We admit that the sign caught our attention; but the world superiority which it claimed tended to repel rather than attract us as a possible customer. The world is a very large place, and there are many people living in it who may be conducting business and other enterprises as well, or better, than we are. In many cases, if put to the test, we would be compelled to admit that we had very limited information on which to base a claim that our product or our service was really "the best in the world".

We believe in the honest enthusiasm which the manufacturer or the dealer has a right to feel in a product of unquestioned merit. Certainly, if we ourselves cannot become enthusiastic over our own handiwork, we cannot expect others to have confidence in the sincerity of our effort. However, there is a "crying aloud from the housetops", in many cases, which over-reaches itself by its vehemence. There is a happy medium between "hiding one's light under a bushel" and adopting the ballyhoo methods which weaken rather than strengthen claims of superiority.

No matter how much pride and satisfaction we may take in our own product or service, it in no way lessens the strength of our position to admit that there are others who have a worthy product or an excellent service. We doubt that it will ever be possible for any man, or any group of men, to so dominate a given field throughout the world, that there will not be several worthy competitors in it. To claim that anything we make or do is the "best in the world", unless a thorough world-wide survey has actually been made, is very apt to lead to doubt in the prospective patron's mind. And even if such a survey has been made in good faith, the already mentioned careless use of the phrase "best in the world" would likely lead to a question of the claim.

We believe strongly in the simple statement that a product or a service is "one of the best" or "among the leaders" or "one of the most popular". We then have a statement which we believe ourselves and which the public is quick to recognise, when it is sincere and based on fact. High-pressure publicity never did, and never can, supplant true merit in winning permanent public approval. There is a compelling force in dignified, straightforward and sincere "crying aloud from the housetops" when the product or the service is known to make good all that is claimed for it.



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# ADVANCED COMPETITION

**Closing the last day of every month**
**Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition**
**Wolfeboro, New Hampshire, U.S.A.**

## Prizes

*First Prize:* Value $10.00.
*Second Prize:* Value $5.00.
*Third Prize:* Value $3.00.

*Honorable Mention:* (*a*) Those who win an Honorable Mention Award and are *not regular subscribers* will receive PHOTO-ERA MAGAZINE for six months with the compliments of the publishers.

(*b*) Those who win an Honorable Mention Award and are *already subscribers, or have been subscribers,* will receive an Honorable Mention Certificate. Those who win ten of these certificates and send them to us to be recorded will receive a neat silver cup, suitably engraved. There is no time-limit. However, ten certificates must accompany all requests for the cup.

Prizes may be chosen by the winners, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a silver cup, suitably engraved.

No Prize or Honorable Mention pictures are sold, exchanged or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, *excepting halftones,* go to the maker of the picture.

All competition-pictures not returned are used to make up the PHOTO-ERA PICTURE EXHIBIT which is sent to schools, libraries, museums, camera clubs, and to responsible organisations for exhibition-purposes, *free of cost.*

## Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. Not more than two subjects may be entered. *Composition, exposure and photo-finishing must be done by the competitor.*

3. Prints on rough or linen-finish surface are not suitable for reproduction. *Mounts must not be larger than 16 x 20 inches.* Prints may be mounted or unmounted.

4. Each print must bear the maker's name and address, the title of the picture, and the name and month of competition, and should be accompanied by a letter, *sent separately,* giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer, and printing-process. Enclose return-postage. Data-blanks sent at request.

5. Prints receiving Prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives *after* he shall have received official recognition.

**Photo-Era Prize Cup**

6. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces is sent with data.

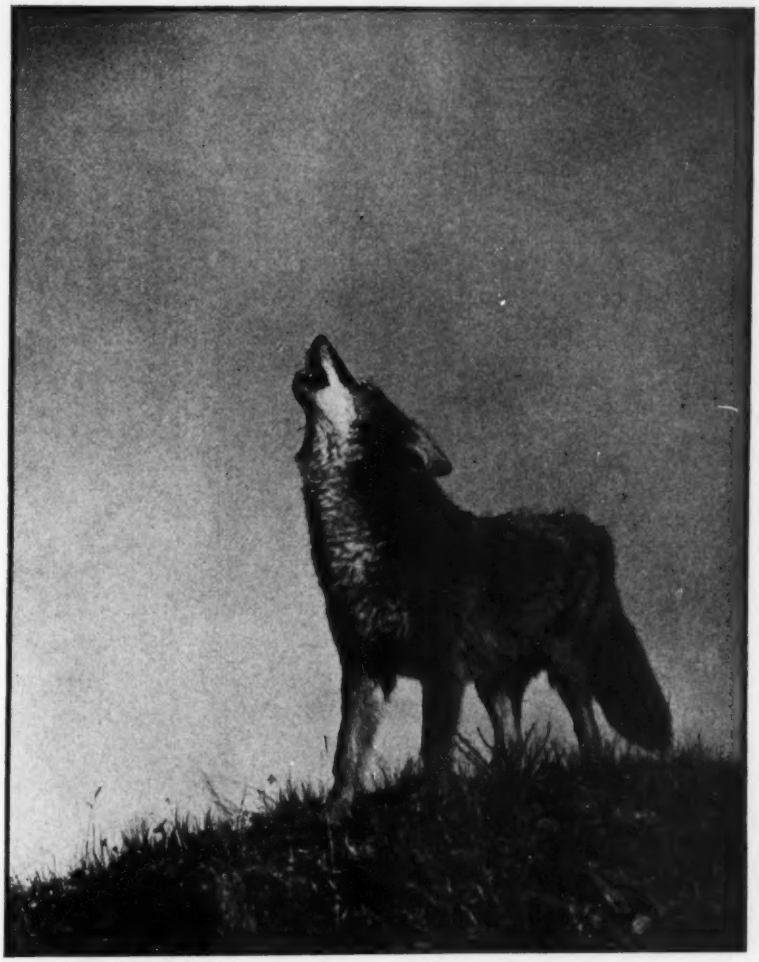
7. Prints should be carefully packed between two layers of cellular board so cut that the corrugations run at right angles to each other.

8. Competitors who have won three first prizes within a twelvemonth become ineligible to receive prize cups in this competition for *one* year thereafter.

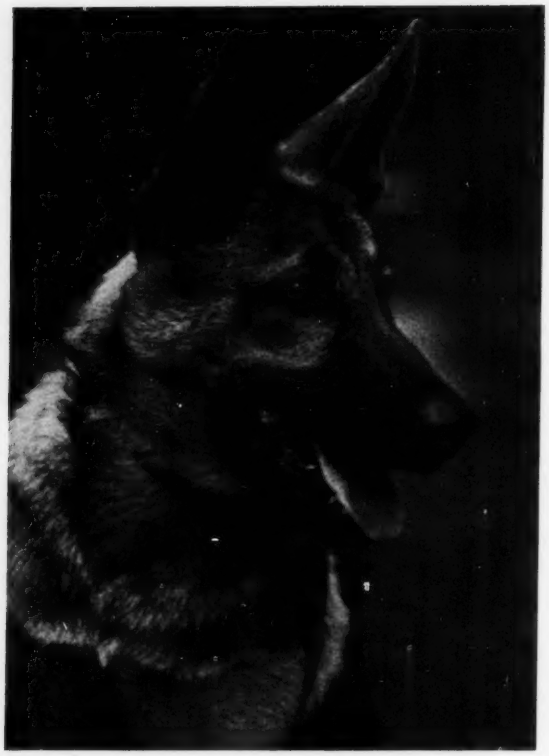
## AWARDS—ADVANCED COMPETITION
### Subject—ANIMAL PICTURES
### Closed October 31, 1929

*First Prize* . . . . . Charles J. Belden
*Second Prize* . . . . . Elaine H. Kern
*Third Prize* . . . . . R. Hodgkins

*Honorable Mention:* Gustav Anderson; Allan F. Barney; M. S. Beros; Karl Butka; Yock L. Chu; A. W. Clark; Harold W. Cole; Beatrice M. Dine; Mrs. W. F. Eldridge; E. P. Fleming; Allen Fraser; George M. Gerhard; Dorothy Jarvis; Melvin Martinson; George Miller, Jr.; John Morris; James Moyne, Jr.; N. J. Nalawalla; M. A. Obremski; A. J. Pandian; W. A. Pierce; Clarence Ponting; William H. Pridham; C. Sallustio; Mario Lucio Scacheri; U. Shindo; Dr. Shupei Shu; S. I. Sparks; Hubert Stead; Dr. Max Thorek; Horace Tyzack; J. N. Unwalla; J. A. Weiss; G. P. Wright.



"A LONELY LAND WHERE THE COYOTES YELL"
CHARLES J. BELDEN
FIRST PRIZE—PICTURES OF ANIMALS



*Second Prize*

ADVANCED COMPETITION

PICTURES OF ANIMALS

FRITZ — ELAINE H. KERN

*Third Prize*

ADVANCED COMPETITION

PICTURES OF ANIMALS

CONTENTMENT — R. HODGKINS

SUBJECT FOR NEXT COMPETITION

# ADVANCED WORKERS

### Subjects for Competition—1930

"My Home." Closes January 31.
"Portraits." Closes February 28.
"Indoor-Genres." Closes March 31.
"Miscellaneous." Closes April 30.
"Commercial Illustrations". Closes May 31.
"Architectural Subjects." Closes June 30.
"Pictures of Children." Closes July 31.
"Miscellaneous." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Animal Pictures." Closes October 31.
"Water-Scenes." Closes November 30.
"Miscellaneous." Closes December 31.

### Portraits

MODERN, efficient illumination, in the form of stationary and portable electric lamps, has made it possible for the amateur, as well as the professional portraitist, to make excellent portrait-studies indoors. No longer is the worker dependent upon daylight or weak artificial light. In this competition, portraits may be made indoors or outdoors, and with or without studio-equipment. The aim of this competition is to encourage those of our readers who like portraiture and to give them the opportunity to present their individual interpretation of portrait-making. There are many viewpoints, and not a few have genuine merit. After all, if portraiture ever followed one definite line of approach, it would become as uninteresting as the standardised passport-portrait. We welcome individual expression when it is sincere, and when it is not merely a straining for effect.

A. H. BEARDSLEY.

LILA — HARRY A. NEWMAN

EXAMPLE OF INTERPRETATION

# BEGINNERS' COMPETITION

**Closing the last day of every month**
**Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition**
**Wolfeboro, New Hampshire, U.S.A.**

## Prizes

*First Prize:* Value $7.50.
*Second Prize:* Value $3.50.

*Honorable Mention:* (*a*) Those who win an Honorable Mention Award and are *not regular subscribers* will receive PHOTO-ERA MAGAZINE for six months with the compliments of the publishers.

(*b*) Those who win an Honorable Mention Award and are *already subscribers, or have been subscribers,* will receive an Honorable Mention Certificate. Those who win ten of these certificates and send them to us to be recorded, will receive a neat silver cup, suitably engraved. There is no time-limit. However, ten certificates must accompany all requests for the cup.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

No Prize or Honorable Mention pictures are sold, exchanged or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, *excepting halftones,* go to the maker of the picture.

## Rules

1. This competition is open only to beginners of limited experience with practical camera-activity. *Composition, exposure and photo-finishing must be done by the competitor.*

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints and enlargements up to and including 8 x 10 inches.

4. Prints representing no more than *two* different subjects, for any one competition, and printed in any medium except blue-print, may be entered. Prints may be mounted or unmounted, as desired.

5. Prints on rough or linen-finish surface are not suitable for reproduction. *Mounts must not be larger than 16 x 20 inches.*

6. Each print entered must bear the maker's name and address, the title of the picture, and the name and month of competition, and should be accompanied by a letter, *sent separately,* giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent at request.

7. Prints receiving Prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives *after* he has received official recognition.

8. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with data.

9. Prints should be carefully packed between two layers of cellular board so cut that the corrugations run at right angles to each other.

PHOTO-ERA MAGAZINE
The American Journal of Photography
Wolfeboro, New Hampshire, U. S. A.

THIS is to certify that an Award of PRIZE
is hereby given to the picture entitled

entered by

in the PHOTO-ERA MAGAZINE Monthly Competition

which closed 192

Editor

PRIZE-WINNERS' CERTIFICATE

PHOTO-ERA MAGAZINE
The American Journal of Photography
Wolfeboro, New Hampshire, U. S. A.

THIS is to certify that an Award of *Honorable Mention*
is hereby given to the picture entitled

entered by

in the PHOTO-ERA MAGAZINE Monthly Competition

which closed 192

Editor

HONORABLE MENTION CERTIFICATE

## AWARDS—BEGINNERS' COMPETITION
### Subject—MISCELLANEOUS
### Closed October 31, 1929

*First Prize* . . . . . Annie Watkins
*Second Prize* . . . . . Edwin A. Reeve

*Honorable Mention:* James A. Bell; Laura M. Clemens; J. Daniels; R. E. Davies; Joseph Drane; Eleanor Fischer; Gladys L. Gilman; L. P. Gravel, Jr.; Dr. Davies Lazear; Walter Lipkau; H. Luscombe; F. J. McCoach; R. E. Midgley; Joseph B. Rattley; Gaston Remy; C. F. Stewart Sharpe; Alice G. Sherbert; Richard S. Shuman; Charles H. Smith; Elton A. Smith; W. H. Smith; Garnet M. Stack; Otto Wilson.



XUM

*First Prize*

BEGINNERS' COMPETITION

MISCELLANEOUS

A STORMY SUNSET — ANNIE WATKINS

RIO LOS PINOS — EDWIN A. REEVE

*Second Prize*

BEGINNERS' COMPETITION

MISCELLANEOUS

# OUR ILLUSTRATIONS

ERNEST H. WASHBURN

PERSONALITY—individuality—these are qualities which stand forth in the work of the true artist; in truth, they make him what he is. He cannot escape them, and his work is bound to reflect them. We gaze upon and admire the art of a great landscape artist and imbibe something of the feeling which was his—which inspired him to create his interpretation of the subject before him. We know that he must have loved that which he sought to portray, else he would not have done it. His personality is recorded in his work, if it be a work of love, and he cannot escape it if he would. So, too, with the portraitist or sculptor—he loves the human form and yearns to express that which inspires him. If he succeeds, he conveys to us, through his chosen medium, his feelings and emotions. We, too, are moved.

The portraiture of Alexander Leventon, whose "En Noir" forms the frontispiece, has made a lasting impression upon the present reviewer, and his portrait of this month has crystallised the thoughts which are expressed in this review. One could not fail to be impressed with the sincerity, dignity, and simplicity of his work. After reading his brief biography, we are more than ever convinced of the truth that his personality and individuality are simple, sincere, and dignified. There is just a touch of pathos, too, showing in his work. We can understand that his trying experiences during the World War have made a certain impress upon him, which shows in his portraiture. "En Noir" has a tinge of sadness that is not only expressed by the predominating tone of black, but in the face of the model as well. What a beautiful arrangement of line and mass, consisting of only a few tones, with the beautiful profile of the woman claiming and holding the final attention! One spot, and a very small one, is in higher key than the face—that on the ear-drop, and it fixes the value of the flesh tones in the face. We admire this picture very much, and the list of several salons where it has been hung is evidence that it has met with approval from most exacting juries.

Data: Made with 2¼ x 3¼ Graflex; Verito lens, F/6, of 6½-inch focal length. Three seconds' exposure by 1200-watt electric lamp, at F/6, on Eastman rollfilm, tank-developed in Rytol. Enlarged on Wellington Cream Crayon Rough. We note that Mr. Leventon's photographic methods are as simple as his pictures. He does the most of his work before making an exposure, which might be done by many others to the advantage of themselves and the betterment of their work.

Samuel F. Racine's travel-story in this issue is replete with interesting incidents and photographic data, which should be of great interest to all, particularly those who contemplate covering the ground traveled by the author-photographer. His photographs convey a wealth of information, and some of them are distinctly well-composed, while all are technically above reproach. Two of them, "Shenandoah Mountain" and "Headwaters of the Chimdemash" have considerable pictorial worth, especially the latter, which shows that Mr. Racine is no novice in the matter of selecting and arranging his pictures. In the case of "Shenandoah Mountain", a graduated filter should have been employed to hold back the upper half of the negative. We should prefer to omit railroad tracks in "Kitsalas Peak", but Mr. Racine had definite reasons for using them.

Data: All pictures made with Zeiss-Ikon Trona camera, 3¼ x 4¼, equipped with Zeiss Tessar. Agfa filmpacks were used, except in one instance. Exposures were as follows: "Ocean Falls", one second at F/8; "Kitsalas Peak", F/16, one second, with filter; "Lucky Luke Mine", F/5.6, one second. No data with "Headwaters of the Chimdemash", which is reproduced from an enlargement of the same size. Other valuable information is given in the article.

J. G. Pratt's natural history pictures are intensely interesting, but are of so technical a nature that we cannot criticise. The shrimp, Figure 5, seems particularly good, while the apparatus in Figure 6 will appeal to those who are fond of fine scientific apparatus. This camera has a capacity of enlarging from two to twenty magnifications, and the author has indicated the number of magnification of some of the photographs.

Harold W. Cole's honorable-mention picture, "Smoke-Eaters", is quite an innovation in the way of an action-photograph. The interest is well centered on the group of horses. It was unfortunate that the iron piping cut through the center and that it comes so near the middle of the print. About one-half an inch taken from the left side helps the situation, as we do not need the horses' tail. The action is very good, and the photography excellent, taking into consideration the time of day and light conditions.

Data: Orion camera, 2¼ x 3¼, with Xenar lens, of 4⅛-inches focus; stop F/3.8; exposure 1/250 second, on Eastman rollfilm, in September, at 4 P.M.; dull light; ABC pyro developer, dilute. Enlarged on Rapid Black smooth, metol-hydro developer. The occasion was an exhibition of State troopers.

The subject of fine negative-grain has received a great amount of attention the past few years, owing to the increasing vogue of the miniature camera, and the demand for enlarged prints has caused much investigation into the production of grainless negatives; so that enlargements of twelve diameters are made from motion-picture negatives, without undue coarseness of image in the resulting prints, by using enlarging apparatus of great precision. Mr. B. Leitner's article throws further light upon the subject and adds valuable data of a practical kind for the benefit of workers in this field. His illustrations offer convincing proof of the efficacy of his method.

"Bert and Ray" have been having a fine time learning photography by themselves. Now they have actually bloomed out with homemade enlarging apparatus and prints to prove its worth. As these prints have been submitted in competition, we must refrain from any criticism at the present time, but believe we are warranted in saying that Bert and Ray are coming along fast in their hobby and have developed considerable skill in photography as well as in carpentry.

Several months ago there appeared an article in this magazine, an illustrated article by S. Topalian, on airplane photography by an amateur, with standard cameras, reflecting and rollfilm. It was predicted then that this kind of photography would increase, especially because of the possibility of shooting from cabin-planes, which are becoming more common every day. E. J. Roy's article in this issue is proof positive that others can do the same thing. His experiences form very interesting reading, and his prints are excellent. "The Outskirts of the City" is a well-arranged picture, with masses well placed and the diagonal lines of the roads converging toward the same district. "Along the River", too, has a decided pictorial flavor, although the white diagonal is too conspicuous. "Across Illinois Farmlands" is by far the most pictorial of the collection. The serpentine curves of the river are well disposed and of a very pleasing character. As the tree-bordered stream meanders through the beautiful and fertile farms, it leads the eye gently and easily toward the distance, where it merges with the landscape without any abruptness. The patchwork areas of differing tones form a pleasing pattern, with emphasis in the foreground, created by the sharply contrasting patches of highest lights and strongest darks. The distance gradually blends into one tone of atmospheric haze, which leaves our imagination free scope. This is one of the few airplane photographs we have had the pleasure to see which we could unreservedly term a picture. It should satisfy the most ardent modernists.

We all admire a beautiful pictorial photograph, by whatever methods or means it is produced, so long as it impresses us as being truthful; that is to say, something that could have occurred. When handwork is done upon it, in such a manner as to be more apparent than the motif of the picture itself, we should prefer to see an out-and-out drawing or painting. Clarence Ponting's "Lakeland Home" is, from our point of view, an example of the rational handling of manipulation. To begin with, he had before his camera a very attractive subject, filled with the charm that surrounds country life, both in natural scenery and quaintness of simple home-architecture—all bathed in sunlight from an effective angle. All of these elements, of themselves, made a beautiful picture, and the artist still further enhanced it by the touch of human interest provided by the figures, which, by clever arrangement or fortunate circumstance, are combined in a very pleasing group.

But he saw that there were objects within the picture that marred its harmony by their ugliness; consequently, he obscured them so skillfully, and modified other over-assertive features so wisely, that were we to have seen only the finished result, as in Figure 2, we might have exclaimed at the "great luck" which favored him by providing such a picture, just waiting for his camera,

We all have preferences, and our own personal taste would have been to leave the weed-tops just showing over the wall at the extreme left, thus relieving the rather set straightness of the horizontal line from the gate to the left margin. We should also like a few of the highlights in the mass of tree-foliage left a bit stronger, to relieve the somberness and add a touch of form. At present the large mass of shadow is too prominently rectangular in shape and without anything to break it up—an unnatural effect. These slight changes are easily effected, according to Mr. Ponting's article, but he preferred it as it is—which bears out the old saying that differences of opinion make horse-racing (and other things, we might add) interesting. Mr. Ponting has impressed his own personality and individuality upon this picture, and we are enabled the better to experience the pleasure which was his and which is imparted to us through his artistry and craftsmanship.

Who has not heard of Arthur Walden and his famous dog Chinook? Very few, we should say, in New England at least, the exploits and intelligence of this wise dog having been so widely published in the press. Commander Byrd drafted them for his South-Polar Expedition, and we learned after a time of Chinook's dramatic death. Mrs. Jarvis, with her wonderful skill and tact, pictured them at Wonalancet, N.H., before their departure, and has spoken of the great courtesy and kindliness which Mr. Walden accorded her when requested to pose with Chinook. We think she succeeded in getting into her picture an expression of those qualities which she admired and appreciated. The grouping is one of complete harmony, and the bond of affection and confidence between the man and his dumb-animal companion is finely expressed. The picture should be a source of pride to Mrs. Jarvis.

Data: Graflex, 3¼ x 4¼; Kalosat lens, of 6-inch focal length; exposure 1/25 second, at F/6.3, in July, at 3.30 P.M., in sunlight; Eastman Super-Speed film, developed in metol-hydro; enlarged on Ansco standard bromide paper.

## Advanced Competition

ORIGINALITY of subject or arrangement is a heavy asset to pictures competing for prizes, and where other good qualities are equally evident among the best of the aspiring prints, the above-named attribute weighs strongly in favor of any print having it. We believe Charles J. Belden's first-prize picture, entitled "A Lonely Land, Where the Coyotes Yell", to possess originality to a marked degree, and this, coupled with its fine arrangement and other good properties, has singled it out and caused it to win first award. The silhouette, or pattern, of the brute's figure against the sky could not be bettered, while the simplicity of the sky-background compels concentration of interest in the animal. That coyote's energy was certainly all centered in that howl, and the artist got him at the very best instant.

Mr. Belden's letter accompanying the print will be of interest to all. He writes: "The Palmos camera that I use was purchased in Germany in 1909, and has traveled over fifty thousand miles on horseback with me. I claim it has gone farther on horseback than any camera or kodak in this country. I have carried it for twenty years in my saddle-pockets, on my daily rounds on the range, whether I am working cattle, riding circle, branding, or doing other things that are necessary in running a cow-outfit. The print shows a coyote giving forth his early morning greeting to the world."

Data: Carl Zeiss Palmos 4 x 5 camera, equipped with Zeiss Magnar lens of 18-inch focal length. The hour was 8 A.M. and the exposure 1/50 second at F/10, on Agfa Chromo-Iso Rapid plate. Development was in metol-hyrdoquinone, and the enlargement was on Gevaert Novabrom.

"Fritz", by Elaine H. Kern, taking second award, is as fine a dog-portrait as could be imagined or desired and is a close competitor. The artist caught "Fritz" with a very keenly alert expression. He almost speaks, so like human are his eyes. The spacing of the head in the picture is well worth noting. Miss Kern was not afraid to exclude all parts of her negative which were not essential to the story.

Data: 3¼ x 4¼ Graflex; Zeiss lens of 7-inch focus; 1/30-second exposure, at F/4.5 on Agfa film, at 3 P.M.



XUM

in October sunlight. Developed in M. Q. and enlarged on Crystal Stipple.

"Contentment", by R. Hodgkins, has captured third award. It is a fine piece of work, and is remarkable in the fact that it shows no movement in any of the models; an achievement in itself. We think the arrangement a happy one, the reclining dog breaking up any tendency toward monotony. The same is true of the placement of the black-headed dogs. The background, although very ornate, seems to be in keeping with house-dogs of high degree, and rather assists the idea of artistocracy among dogs. The straight white edge of the bench is unduly prominent and should be subdued.

Data: Made in August, at about three o'clock, in the shade. Bausch & Lomb 2b Tessar lens; 8-inch focus; 1/25-second at F/8, on Orthonon plate; developed in pyro-soda. Enlarged on Velour Black.

### Beginner's Competition

THE winners in this class are extremely close competitors. We should say they are "nip and tuck"; but "Stormy Sunset", by Annie Watkins, wins out by a hair's breadth, having a little more concentration of interest. The exposure was well suited to the conditions, and the subject is well placed, especially the low horizon-line. A more experienced worker would probably have waited for the big wave to pass out of the view. However, it is not too conspicuous. Slightly deeper printing of the upper part of the sky would improve the picture.

Data: Made with Eastman 2c Jr., camera; single lens, 1/25-second exposure; between stops 2 and 3, on Agfa film; April afternoon; changing light. Eastman developer was used, and an enlargement was made on Eastman Velvet bromide.

Edwin A. Reeve's second-prize winner, "Rio Los Pinos", is a fine piece of work, stepping close on the heels of the first award. As we have said, it has not the concentration of interest or character of the former, but is a technically perfect result. It would be hard to imagine a better arrangement of the picture. Good values were secured by using a filter, which held the clouds and gave a truthful quality to the river and rapids, which in many such subjects are rendered too light. A few years ago, such good results were mostly secured by expert professional "view-men" with their trusty "8 x 10's". Today, however, thanks to increasing knowledge and really fine small cameras and accessories, beginners who are willing to study the well-laid-down principles of correct technique can accomplish wonders.

Data: Voigtländer Avus camera, 2¼ x 3¼; Skopar F/4.5 lens, of 10.5 cm. focus; 1/25-second exposure at F/6.3, with graduated filter, on Agfa filmpack; at 10 A.M., in August sunlight. Metol-hydro developer and Novabrom enlargement.

### Garo Exhibition at the Appalachian Mountain Club

THIRTY-ONE beautiful examples of the finest in photographic art, the work of the master artist-photographer, John Garo, were on exhibition at the Boston headquarters of the Appalachian Mountain Club during the latter part of November and attracted much attention.

The work of Garo, conspicuous in any exhibition, was made many times more enjoyable and impressive by being displayed as a one-man show. Visitors were greatly pleased and charmed by the fine pictures which Mr. Garo lent the Club for this showing.

This collection consisted of twenty-one portraits, nine landscapes, and one still-life, all of large size, in gum and bromoil. The portraits included many well-known Bostonians and other notables. Among these, such leading characters as the late revered Boston patriarch, Rev. Edward Everett Hale, D.D., Calvin Coolidge, and the late John J. Enneking, famous American landscape painter, were represented by faithful portraits. A beautiful vignetted head of a young woman, with hair done in a former style, when a woman's hair was "her crowning glory", charmed by its delicacy, being done in a light sepia.

To those not familiar with Garo's landscapes, the examples of this branch of the art must have been a revelation to behold for the first time. They were of low tone, mostly dealing with nature in her more subtle moods, when the approach of nightfall obscures many of the day's distracting details. In every fine quality, they were worthy specimens of fine Garo art.

The single still-life was his widely known group of wine-flagon, bronze vase, wine-glass, and bunch of grapes, suggesting in a masterly arrangment and technique the textures and solidity of these component objects.

Those picture lovers who were so fortunate as to see this beautiful collection must have felt it to be an inspiring experience.

ERNEST H. WASHBURN.

### "Beautiful, Busy, Historic New Jersey"

WE take particular pleasure in calling attention to an exhibition of photographs by the camera clubs of New Jersey, which was held at Vail Hall, Telephone Headquarters Building, 540 Broad Street, Newark, New Jersey, in November. The object was not only to give New Jersey some splendid publicity, but to unite in a common cause the following camera clubs: Bridgeton Camera Society, Elysian Camera Club, Hoboken, Orange Camera Club, Newark Camera Club, Wekearnyan Camera Club, and individual contributing artists and industries. The photographs displayed showed "New Jersey's varied beauty, the vast coil of its mighty industries, and the historic relics of its proud past".

According to a paragraph in a very attractive announcement of the exhibition, this concerted pictorial effort is stated to be "An exhibition for lovers of fine photography; and that it is more than this, affording the first opportunity of its kind for Jerseymen to step aside for a few moments or hours from the urgent business of everyday living, and to absorb the inspiration that the great State they live in affords, captured forever here by the camera's art."

We commend this united photographic effort on the part of the New Jersey camera clubs and we suggest that the splendid example which they have set might well be followed by camera clubs and photographers in other parts of the United States.

### God's International Salon

THOUGH I am rough, and fail to see
The beautiful in man-made art,
God keeps an open gallery
That I have taken to my heart;
For me He paints the sky and ground,
The majesty of sunset bars;
No stilted master ever found
The cold, clear beauty of His stars.

*Thru the Darkroom Door.*

# THE EDITOR'S CORNER

### We Thank You All

Most of our readers know that any publication has to be prepared days, weeks, and, sometimes, months in advance of the date of issue. We often wish at this time of the year that we edited a newspaper, so that we might acknowledge day by day the many Christmas and New Year Greetings which come to us from all over the world. As it happens, we are obliged to go to press with our January number just as many greetings reach us; and, in consequence, we are compelled to postpone a more detailed acknowledgment until our February issue, which is now in preparation at the very height of the holiday season. As we write these lines, the greetings have begun to arrive, and we wish to let our friends know that their messages are being received and that we appreciate every one of them as they arrive.

### Changes in Competition Rules

We wish to ask those who enter prints in our competitions to note carefully some changes in the rules, which we believe will result to our mutual benefit. One has to do with the size of mounts, when used. In the future, please use mounts not to exceed 16 x 20 inches in size. Larger mounts cost more in postage and to buy; and, besides, they complicate the handling of competition-pictures in our office. Mounts 16 x 20, or smaller, will be appreciated. The second change refers to the sending of a duplicate print on glossy paper for reproduction, when the competition print is on rough paper or on a paper which does not lend itself to good reproduction. We have found that our engravers are able to obtain satisfactory half-tones from prints on virtually any of the modern papers. However, colored prints, blue prints, green prints, and toned prints make very difficult copy for the engraver, and we much prefer to have pictures in black and white. We try to obtain the best possible reproduction from every picture we publish, and we feel sure that our readers will be glad to co-operate with us to that end.

### A Book That Helps and Inspires

We believe that just a word is in order about a book which, although intended for literary folk, nevertheless has great value for the amateur or professional photographer who wishes to sell pictures and other material to newspapers and magazines. We refer to "Where and How to Sell Manuscripts", by William B. McCoutrie, published by the Home Correspondence School, Springfield, Mass. Its 478 pages, when utilised as the author intended, comprise as accurate a market-guide for photographs and literary material of all kinds as we believe it is possible to publish in book-form. The listing of virtually all magazines, newspapers, and other publications—not to mention greeting-card manufacturers, book-publishers, syndicates, and others—which are in the market today is a tremendous help in deciding where a certain picture or article should be sent. Every field of human endeavor seems to be covered. But, perhaps, best of all is the inspiration which the book gives. By that we mean that the description of editorial needs stimulates the reader to try new fields and to keep on trying, even after material is returned from several editors. The thought behind the preparation of this book is that there is a market somewhere for every good picture or manuscript. We use the book ourselves and recommend it heartily to our readers.

### Our New Department—"What's New?"

Beginning with this issue we have a new department which we believe will be of interest and value to our readers and to our advertisers alike. We believe that most of our readers wish to know about new photographic goods as they are produced by manufacturers or introduced by the dealers. The leading manufacturers and dealers have approved this new department and have heartily agreed to give us prompt information as new goods are brought out. We wish to make it clear that the material in this department is to be confined strictly to *new goods* or *new services* and that we shall treat these items as news which we believe will be of value to our readers in keeping them in touch with the progress of the photographic industry.

### "Photos"

We are in cordial agreement with Mr. Justice Hill, who recently, in the Divorce Court, remarked: "I am one of those who make stands in the last ditches for the purity of the English language, and I object to the word 'photos' appearing in the shorthand notes of the case." It is, of course, impossible to eliminate the vulgarism "photo" from ordinary speech or even from writings, but photographers at any rate should take their stand with Mr. Justice Hill in adhering to the use of the uncorrupted term "photograph". We believe they do, and we endeavor to encourage them by taking every possible precaution to prevent the use of the word "photo" in *The British Journal*. It deserves to be borne in mind that "photo" is not simply a contraction, as some dictionaries state, but a vulgarism, and, though the word may be traced back as far as 1882, that is no reason why photographers should stoop to use it for the works which they produce.—*The British Journal of Photography*.

[We agree heartily with our esteemed British cotemporary. Whatever word, by incorrectness, sound, or possible inference, appears to belittle the good work of amateur and professional photographers should be avoided.—Editor.]

Be bold! Attack! Do not seek martyrdom, but face it if it comes. Because a man thinks sanely, because he follows a true ideal while the majority worship the fatted calf and cling to superstitions, should he then skulk in a corner, refuse to enjoy God's sunshine and blue sky, eat sour grapes, and nurse hysteric despairs?

Let a man refuse a tainted million; but let him enjoy his buttered toast on his own earned hundred.

Arthur Lynch.

# THE PICTORIAL EDUCATOR

ARTHUR L. MARBLE

*Communications intended for the editor of this department should be addressed to him, at Utah State Agricultural College, College Hill, Logan, Utah.*

## Movies at Hood College

THE Filmo is rapidly displacing the camera, just as the movie has displaced the "illustrated lecture" of earlier day, and as the movietone, when further perfected, may displace the light opera. It is quite natural that this should take place in recording the varied activities and events of a modern college. The ease with which campus, buildings, equipment, including laboratories and library, student activities of both work and play, and the pageantry of public events, can be filmed for immediate presentation, or preserved for future record, is so apparent to those who have taken the pains to try, that I should not be greatly surprised at the rapid increase in the number of institutions inaugurating such form of publicity. This should be clearly distinguished from the use of films in classroom work. The one requires merely projecting apparatus and a proper selection and use of material. The other demands a Filmo camera and a constant attitude of alertness toward the routine of college-life as well as its more spectacular phases. To know just when to use the camera, and how, demands an official with artistic taste as well as adequate technique. This individual may not be easy to find or to train; but when once secured, he greatly multiplies his usefulness to the institution.

We began at Hood College by calling in a Missionary Education Secretary and retaining him with us for several days at a time, including our Campus Day, and May Day, both for direct work and for the training of an official who later took over the work. Except for occasional visits of the secretary, who seems to take pride in the results of our work, we now carry it on ourselves.

The subject matter to be filmed differs so greatly with different institutions that little advice can be given. We have three films that require about fifteen minutes each for projection. This provides for about an hour's program when so much time is available, or any one or a combination of two may be used where less time is permitted.

The first reel represents the visitor as he arrives at the institution in the morning. He views the various buildings and the trees and shrubbery upon the campus, watches the students on their way to and from morning chapel, enters laboratories where students are at work, and glances into the library and the registrar's office. He lunches in the college dining room, where the entire student group is served. After further viewing the campus, the visitor stops for a cup of tea at one of the residences and makes a final call upon the president in his office.

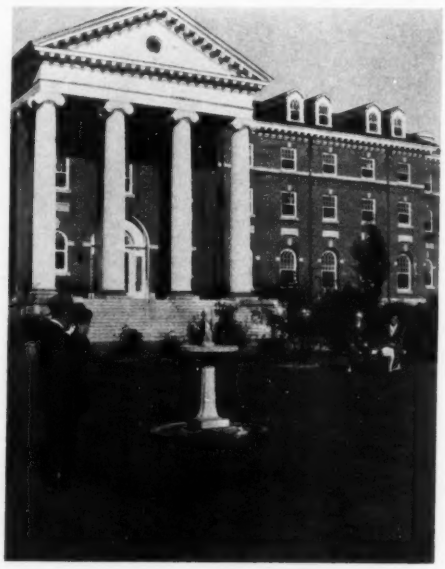
The second reel is called "Play". It could have been named "Physical Education", since it includes all the outdoor work of that department. It opens with a game of field hockey between the girls of the college and the alumnæ. It includes a baseball game between fathers and daughters. It includes old-fashioned rope-jumping on May Day. It covers track and field events, such as high and broad jumping, hurling the discus, hurdling, running and walking races, archery, tennis, and horseback riding. A trip is taken to the mountain log cabin owned by the Athletic Association, from which a rare view is shown of the valley where

"The clustered spires of Frederick stand,
Green-walled by the hills of Maryland."

Then the visitor, who plays an important part in the first reel, is taken up in the little airplane, *Challenger*, from the neighboring airport, from which he is able to perfect his knowledge of the geography of the college.

The third reel is the most beautiful. It is termed "Pageantry" and covers the colorful events of Campus Day in early October, the May Fête of early May, and commencement activities of the first week of June. Each of these events brings large numbers of parents and friends to the college and each is spectacular in its own way. No description of the picturisation of these events would do them justice; but to one who has seen them, the reel brings pleasant memories.

The reels are titled in such a manner as to need no explanation. A running commentary upon the scenes or subjects suggested by them adds to the interest, however. They carry the general suggestion of a day spent at Hood in viewing its plant, its equipment, and its work, and of a college year during which play activities and picturesque pageantry pass in review. They are shown first to the incoming students during Freshman Week. They are in demand for meetings of



INSPECTING A NEW MEMORIAL
HOOD COLLEGE, FREDERICK, MD.

the college clubs, for alumnæ gatherings, for parent-teacher associations, granges, women's clubs, the meetings of luncheon clubs, and for the assemblies of high schools.

By means of a portable screen, the pictures can be shown anywhere, provided there is an electric current, in a small private room or in a fairly large auditorium. The equipment is handled by our alumnæ secretary—a young woman—by our superintendent of buildings, or by the president when the case requires.

DR. JOSEPH H. APPLE, *President.*

## Paintings Reproduced in Color

IN the new catalog "B" of the Art Extension Press, Westport, Conn., we are pleased to see many additions to an already excellent line of color-reproductions of famous paintings. A half-tone engraving of one of the Artex Juniors can give no idea of the exquisite coloring worked into the prints. Henry Turner Bailey, Director of the Cleveland School of Art, says of them:

"For years lovers of the great paintings of the world had to content themselves with photographs. These reproduced faithfully the composition, the modeling, and drawing, and, to a degree, the dark and light of the originals, but not the colors. Only recently, since the invention of color-photography, as applied to the four-plate half-tone process, have reproductions in color been possible.

"Color-process plates, as they are commonly called, may be depended upon to reproduce the original colors only when they are made by an expert color-photographer, an expert photo-engraver, and when used by an expert color-printer. Under these conditions, and printed 'one up', that is, a single print at a time from the press, a reproduction well-nigh perfect is possible. When the prints are made commercially, in large sheets, rapidly printed, and cut apart afterwards, they are far less satisfactory on account of imperfect make-ready and registration. Artex Prints, averaging in size 8 x 10 inches, are made from the originals by the expert craftsmen of the Art Extension Press at Westport, Conn. Printed one at a time by the most skillful color-printers available, they reproduce the original colors as faithfully as is possible under 'the present state of the art'. For observation and study, and for the enjoyment of the effect the artist had in mind, they are, for the student, highly satisfactory. There is nothing better."

**No. 500 Appeal to the Great Spirit Boston**
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Phototext Junior Art Extension Society American School
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## A Worth-while Book

OCCASIONALLY, something comes into our lives of such worth that we cannot rest until we have told others about our discovery. No originality is claimed for the idea that "Visual Instruction in the Public Schools" is a volume too precious to miss—for other writers have said the same thing—but ignoring it in this department would be to overlook what is perhaps the most complete and extended treatise on the general theory and applications of visual methods that has yet appeared in the English language.

The book is written by an expert in the field, Anna Verona Dorris, now head of the Departments of Visual Instruction and Geography at the State Teachers College, San Francisco, Calif., and instructor in Visual Instruction in the Extension Division of the University of Southern California. She is also vice-president of the Visual Instruction section of the National Educational Association.

The aim of the author is "to guide the teacher so that she will be able to use visual materials of all sorts with economy and with the best possible results." Miss Dorris divides her work, like all Gaul, into three parts. Part I gives a comprehensive definition of visual education, together with a complete description of the many types of visual aids. The second part tells how the various curricular subjects may be motivated by these aids. Perhaps one of the outstanding contributions of Miss Dorris is found in the third part, in which she discusses the need for training teachers in the use of visual aids. Such training, according to the author, should include: "1. The fundamental reasons and technique for using visual instruction in classroom teaching. 2. The source of supply, the care and use of materials and apparatus. 3. Enrichment of the curriculum by means of visual instruction."

Chapter IX is separate from the other divisions and deals with the important matter of the organization and administration of a visual instruction department.

In its subject matter and treatment, "Visual Instruction in the Public Schools" fills many requirements, ranging from those of the latest initiate to those of the most sophisticated director of a visual education department. This report would not be complete without some reference to the appendices at the end of the volume, consisting of sources of such necessities as photographs, prints, pictorial charts, globes, slides, films, and other equipment. Appendix B contains as many pages devoted to a specific list of pictures related to particular school subjects.

We are told that on one occasion Demosthenes, the Greek orator, delivered a spirited oration for the purpose



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of arousing his countrymen to the defense of the flag. His audience appeared deeply moved by an eloquence that seemed to pierce their very souls. After Demosthenes had finished speaking, a citizen came up to the weary orator, congratulating him on his speech. Quick as a flash, Demosthenes turned on his admirer and asked: "But are you going to war?" He was answered by a shameful shake of the head. "Then I have failed", said Demosthenes. "The purpose of my talk was to get you to go to war. Failing this, my words were in vain."

The immediate application of this incident is not to pretend to any Demosthenesian merit in advising you to read "Visual Instruction in the Public Schools". But is it wrong to hint darkly that unless you now have such a desire, part of my time has been wasted?

### Potential Value of Historical Photoplays

Dr. Daniel C. Knowlton of Yale University undertook a very comprehensive series of classroom-tests to help determine the teaching-value of the series of historical films, "The Chronicles of America Photoplays." The report of his experiments appeared in the *Historical Outlook* under the title of "Improving the Quality of Instruction in History with the Aid of the Photoplay". I regret that lack of space makes it impossible to give a detailed account of this excellent scientific study. Reprints of the original articles may be secured, however, from the Yale University Press Film Service, New Haven, Conn.

### Personal Classroom Pictures

In a little booklet called "The Memo Idea in Visual Education", the Agfa-Ansco Corporation draws attention to the teaching possibilities of photographs made by the teacher for classroom use. In courses where this is feasible, the plan undoubtedly does create an intimate touch between teacher and pupil that is highly desirable. Dr. Arthur Dean, in introducing the little booklet, writes as follows:

"The broadest avenue to the brain is the eye. The ear hears sounds as they are. The hand carries impressions as they exist. But the eye sees all. A picture gives imagination play. It stirs impulses. It starts action. *A picture speaks.*

"Show some pictures furnished by a school board. Another day, show some you have taken. Tell how you happened to be there and how you got the picture. In, 'Pupils, I want to show you a picture I took', *both teacher and picture speak.*

"When a child's brain is stirred by, 'I wonder what she's got and how well she can take them', when his good will is awakened by 'her' picture, when his desire to know is stimulated by this intimate touch—then, perhaps only then, does he put his whole feeling and thinking self into action.

"Many desirable pictures cannot be purchased. How many times a drawing teacher laboriously copies at an educational exhibit! How many hours wasted by the industrial teachers demonstrating to succeeding classes processes which could be photographed once for all! How many teachers of science and history seeking 'original material'!

"I hold nothing against slides, pictures, or strips furnished by authorities. I am simply bringing out psychological values of the personal touch—the *intimacy*—if I may call it—of a teacher showing her class, professional associates, and friends pictures taken 'Johnny on the spot'. They are better pictures and create greater interest, because they are *her* pictures of what *she* saw, *when* she saw it, and *why*.

*Courtesy of Agfa-Ansco Corporation*

SECTION OF MEMO FILM

"*Why?* Because she was so interested in her historic trip, in seeking for specimens, in presenting processes, that she made this picture for *us*. Her interest starts *our* interest.

"*And 'tis here that education starts.*"

The accompanying picture illustrates a number of photographs made by a Memo camera in the Boys' Pre-Vocational School of Rochester, N.Y. This is but one of many construction projects that may be portrayed forcefully in a series of still pictures.

[We hope that readers of this department will send in some comment with regard to their own experiences with still and movie cameras in classroom work.—Editor.]

# THE MONTH IN APPLIED PHOTOGRAPHY

C. B. NEBLETTE, A.R.P.S.
*Division of Photography, A.M., College of Texas*

## A New Light-Intensity Meter

EVER since the beginning of photography, the judging of light value has been one of the great problems to the photographer or cameraman. In many cases in the past, as now, the person responsible for the making of pictures is required to judge light-values using his naked eye as an indicating means. His accuracy or ability to do this is the product of his appreciation and his experience as received through this natural indicator. The unassisted eye at its best is considered unstable, with a possible error of one hundred per cent. from day to day, when used as a light-intensity measuring instrument. It is unreasonable to expect that two or more men would come very close in a simultaneous check. In order to assist the eye in measuring light and to obtain consistent results, several types of photometers have been developed. In most cases, these instruments are rather awkward to use because they require a comparatively slow process of matching of light-intensities in order to obtain a reading. Therefore, they might be classed as laboratory equipment, from a studio standpoint, rather than practical and portable direct-reading indicators.

As a natural result, there has been a need for a studio type of photometer that could be worked, set up, and read quickly without making adjustments. For this reason, the Westinghouse Lamp Company and the Westinghouse Electric and Manufacturing Company have designed this new tool to be placed in the hands of the photographer or cameraman to assist him in his work.

This new indicating electrical eye should have the same value to the cameraman as the slide-rule to the engineer. It is a quick-reading light yardstick, as simple as a voltmeter to read. As this is a very new development, the possibilities or limitations of this device are yet to be ascertained, but it is felt that it has a wide application in the motion-picture and other photographic industries.

This meter is self-contained and is carried as a complete unit in one case. The light-sensitive pick-up is a photo-electric cell covered with a shield. A window is cut in one side to admit the light to be measured. The photo-electric cell unit is connected to the meter by a six-foot double-conductor cord, making it possible to move the cell-unit around within that radius without moving the case. The instrument contains a commercial portable micro-ammeter calibrated directly in foot candles. The smallest size "B" batteries are wired and mounted into the case. As very little energy is required, the battery life will be about its shelf-life.

The photo-electric cell is generally known as a light-sensitive tube having somewhat the appearance of a radio tube. The tube has two distinct parts, an anode and cathode. The cathode is coated, light-sensitive material giving the tube its characteristics. Many other commercial uses have been found for the photo-cell. It is used as a smoke detector; to sound an alarm in case of fire; to count the product of quantity production, as cars are counted, by the interrupted beam of light, when passing through the Holland Tunnel. The cell plays an important rôle in several different schemes of motion-picture sound-reproduction. (The resistance of the cell will vary with intensity of the light striking it). There are a number of different types of cells, and their characteristics vary materially with the elements used. They can be made of different materials to respond to different wave-lengths of light. Dr. Rentschler of the Research Department of the Westinghouse Electric Manufacturing Company, has constructed a photo-electric cell that will respond only to the ultra-violet region of the spectrum. This cell is now being used in an ultra-violet recording device, making it possible to obtain a quantitive reading in ultra-violet units.

WESTINGHOUSE LIGHT-INTENSITY METER
C. B. NEBLETTE

The cell used in the light-intensity meter is a special cell having a very broad response, covering the visible spectrum. This response is such that it will fit in very well for light-measurements where the combination of Mazda light and panchromatic film is used. A spectroscopic study of the response of the panchromatic film when plotted against the light of the Mazda lamp shows that the results are somewhat near a straight line, making it possible for the meter to give an integration that will come close to the photographic results obtained with given light-values. It is thought that this meter will be of considerable value when colored pictures are made because of the integration of the values of different wave-lengths of light through the visible spectrum. The same cell can also be used for the measurement of north-sky daylight, giving



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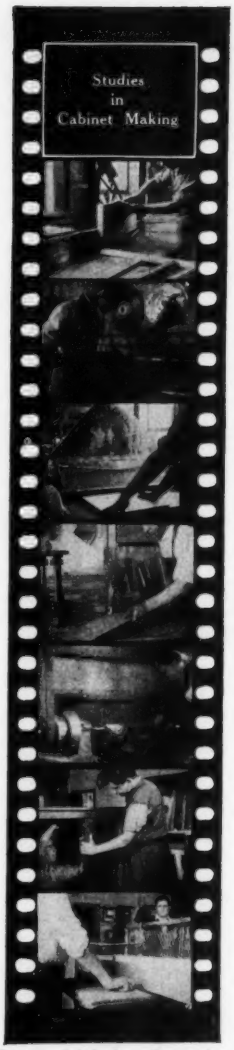


*Courtesy of Agfa-Ansco Corporation*

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approximately the same values for the same intensity from a photographic standpoint. The photo-cell, as used, is directional in its pick-up, making it possible to study the light from different angles. The pick-up can be made non-directional if so desired.

The sensitivity is such that a range of full scale readings can be made from 100-foot candles to 3,000-foot candles. It is believed that the range of 400- to 500-foot candles, as read on a full scale of 1,000-foot candles, will fit the studio-requirements best; but this is a matter to be controlled by the professional studio man.

In order to provide a simple and effective means of calibrating the meter, without returning it to the factory, it is planned to mount a low-voltage lamp in the meter-case to check the cell for calibration. At a definite spacing, a calibration check can be easily made. The lamp will be a six-volt type to be supplied with energy from a six-volt external battery.

Mr. M. W. Palmer of the Paramount-Famous-Lasky Corporation has been doing some work with this photometer during the past few months, to determine the light-values on motion-picture sets. He has reported that while he was checking the light reflected from an actor's face, the light-intensity meter picked up the change in illumination caused by this man lighting a cigarette. This incident may illustrate how sensitive this device is to change in light-intensity.

It is believed that this device has an application in connection with the film-printing machines. There are a number of different settings of the printing-lamp required to have the film printed without glaring or too dark results. To control this condition, the different settings must be made by the operator. In order to try the light-intensity meter for this application, a special mask for the photo-cell has been made to fit into the aperture of the printer. Mr. La Grand of the Paramount-Famous-Lasky Corporation has been making tests to determine the meter's value in this field.—*Presented before the Society of Motion-Picture Engineers in Toronto, Canada, on October 10, 1929, by* James McCoy *of the Westinghouse Lamp Company.*

## Motion-Pictures and the Reading Public

It has been an acknowledged fact for a number of years that motion-pictures based on well-known books encourage widespread reading of those books and other books on related subjects. To what extent this was true it was hard to say. Miss Marilla Waite Freeman, librarian of the Main Library, Cleveland, Ohio, throws some interesting new light on the subject:

"A year after the appearance of 'Dorothy Vernon of Haddon Hall' in picture form, the head of the History Division of the Cleveland Library reported that not since the first showing of the picture had it been possible to keep a copy of the life of Queen Elizabeth on the shelves, nor of Mary, Queen of Scots, nor indeed of any of the books on the Elizabethan period listed on the Dorothy Vernon bookmark", said Miss Freeman.

"The current 'Show Boat' has drawn into circulation all the Mississippi lore from Mark Twain's classics down, and has created a demand for Negro spirituals and folk songs as well.

"From the divisions of Philosophy and Religion and of Foreign Literature, after the showing of 'The Ten Commandments' and 'The King of Kings', was reported a greatly stimulated circulation of the Bible, a book which the library carries in twenty-seven languages. One woman was so delighted with her discovery of Senator Beveridge's little book, 'The Bible As Good Reading', mentioned in connection with the film, that she went off to buy six copies to present to her friends."

For several years the Cleveland Library has been co-operating with local exhibitors and with producers in circulating bookmarks calling attention to books bearing on the motion-picture subject and in preparing exhibits of "stills" from current attractions. The success of such a community enterprise has led other libraries to follow the Cleveland example. Now the plan is to assist libraries everywhere to work hand in hand with the motion-picture industry.

For such a purpose, the American Library Association will join with other national organisations in previewing films in California. It will entrust to the Los Angeles Public Library and to the Cleveland Library the duty of seeing pictures as early as possible after production and of recording their impressions of the pictures for library purposes. On the joint recommendations of the two libraries, a bookmark reading list will be prepared, if material is available. The list will be sent to the American Library Association and will be made available to the producers of pictures for inclusion in press books and other advance material to be shown in towns which have public libraries as suggestions for their co-operation.

The first picture viewed by the Los Angeles Library Committee is "The Bridge of San Luis Rey", of which Miss Caldwell writes: "The production succeeds to a rare degree in catching the spirit of the original. One regrets the concession to sentimentality at the end in the death of Pepita and Estaban, clasped in each other's arms. But on the whole, changes are made only as necessary to develop dramatic possibilities and to give unity." She sums up, "Recommended highly", and encloses a similar report from another member of the committee.

The system followed in Cleveland was outlined by Miss Freeman at the recent meeting of the American Library Association in Washington, D.C.:

"Historical films, generally speaking, are richest in book connections. The very beautiful film version of E. Barrington's 'The Divine Lady', though this book is not in itself extraordinary, has brought into play for exhibit and circulation a wide range of library books and art material, partially indicated by the captions of its bookmark reading list, with four titles under 'Emma, Lady Hamilton', four under 'A Painter Inspired by Beauty, George Romney, 1734–1802', four under 'Nelson, the Man and Hero', and four more under 'Nelson and Lady Hamilton'.

"Even more important in reaching the movie fan, where he lives, are the so-called bookmark reading lists.

"What all this type of co-operation can do for the picture is obvious. What it has accomplished for the library, among other things, is to set a large number of film-fans to reading history, biography, travel, by calling attention to books that are as interesting and often as romantic as fiction.

"Frequently some unusual angle of potential interest is discovered by the previewers, as with the charming picture made from the play, 'Seventh Heaven', a quotation from which, 'Get courage inside you', was used to display and get into eager circulation a group of such stimulating books on courageous living as Barrie's 'Courage' and Basil King's 'Conquest of Fear'. 'Sorrell and Son' brought a gratifying circulation of fiction and biography suggested under the captions, 'Good fathers in fiction' and 'Some real fathers and sons', as well as of books about 'The job of being a Dad'. 'We Americans' yielded a wide circulation of books about immigration, and biographies of distinguished foreign-born Americans." *The Motion Picture.*



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# LONDON LETTER

CARINE AND WILL CADBY

After writing off our London Letter last month, we turned again to the current number of Photo-Era Magazine and saw that the Ciné-Kodak idea of entertaining sitters in the studio, which we had thought so novel and attractive, was already functioning in Toronto, seemingly with great success. Altogether Kinematic Art, as it is now called, is penetrating rapidly the ranks of the amateur photographer. The Camera Club in London, in conjunction with the Amateur Cinematograph Association and the Film Society, held a conference last month in order to give greater unity to the Amateur Film movement.

This is valuable work, for there are so many amateur film-associations now, up and down the country, that would be helped by getting into touch with others; and it certainly is a sound scheme to link them up, give them a central organisation, and let them pool their experiences. Competitions were arranged and there were interesting discussions on central circulating libraries, national headquarters, and so on. Eisenstein, the Russian producer of "Potemkin"; Hans Richter, the German, who has specialised in abstract films, and Mr. Ivor Montague, the chairman of the Film Society, were expected to speak.

We hear a great deal nowadays of the changing of the film technique—and quite time too, many of our readers will say—but things really do seem leaning toward a less artificial procedure. Mr. Goulding's idea of photographing a play with the characters acting their parts in uninterrupted continuity seems to us a step toward more naturalness and better art; and now a Russian has come on the scene whose contributions to film-technique seem revolutionary and excellent—in fact, almost too good to be true, at any rate to our slow-moving minds.

His great idea is to have nothing that is not absolutely real and natural. He describes his method as an attempt to create a new film-language, and says he wishes to use the film for the widening of human vision and the stimulation and suggestion of ideas—which sounds delightful, even if a little Russian and vague, and it is certainly against all the traditions of Hollywood artificiality.

Vertoff, the Russian just referred to, is said to wander about the country with a camera photographing whatever strikes him as of possible value in the kinema. For instance, if he sees a smith shoeing horses, children coming from school, a flight of birds, and so on he will make a record and store the subject up in one of his numerous pigeonholes for future use, so that when he eventually builds up his film he will have these natural studies to his hand. "Back to Nature" is his insistent cry, and at all costs do away with theatrical effects.

Another of his technical experiments is the development of "cutting" and the mixing up of two incidents alternately in such a way that they appear visually together. The principle on which he works is based on the persistence of vision, each impression lasting—to the eye—a fraction of a second after the actual object has been removed; so that it is really optical illusion which enables an alternate succession of impressions to be made to run into each other. He also gets effects by having half of his picture moving while the other half is made with the camera at rest. He also has many other devices that rather make one's brain reel; but we look forward with great interest to seeing some results. One expects originality and initiative from the Russian film-industry, which has produced such pioneers as Pudovkin and Eisenstein.

Last week we went to a "talkie"—are they called this in the States, we wonder?—and at the risk of being thought very out-of-date, we must confess we were rather horrified. Such big, booming voices coming from the cupid's-bow lips of fragile-looking ladies puzzled us; also we found their speech very difficult to understand. All the Americans we have met talked exactly like ourselves; but these "talkie folk" were barely intelligible to an English audience.

We know—and George Bernard Shaw is always telling us—that there is a big future for "talkies", so that probably our experience has not been fortunate; and, at present, we are feeling very much in accord with Aldous Huxley, who has only just seen his first "talkie". When his friends patronisingly and contemptously said to him, "A little late in the day, but better late than never", his answer was: "Better late than never? Ah, no! There, my friends, you are wrong. This is one of the cases where it is decidedly better never than late, better never than early, better never than on the stroke of time". And in most Huxleyish manner he goes on to exclaim: "Oh! those mammy songs, those love longings, those loud hilarities! How was it possible that human emotions, intrinsically decent, could be so ignobly parodied?"

Now that the summer photographic season is over, it is possible to review the progress made in color-photography with an ordinary camera, so extensively boomed in the early months of the year. There is little doubt that the color-snapshot, made possible by the production of "tripack" films, with which all three negatives required for the various trichromatic printing-processes can be made at a single instantaneous exposure, has been somewhat disappointing. We suggested in an earlier letter that amateurs would probably make mistakes in exposure at first, and it seems that this is what has happened in a great number of cases, for a large proportion of the spools sent in for professional development have been hopelessly underexposed. Also, the printing-methods employed by the firm who sponsored the process have not been uniformly satisfactory, and the proportion of good color-prints to exposures that have been approximately correct has not come up to expectations.

However, the process is in its infancy, and mistakes on a large scale are almost certain to occur during what we must still consider the experimental period. Both the amateur and the printer need experience; and, although, so far, the early and no doubt exaggerated expectations of the public have not been realised, it does not follow that the process will not make good, as both sides get to understand the capabilities and limitations of color-snapshooting.



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# WHAT'S NEW?

*A department reserved exclusively for the announcement and description of new photographic goods and services*

## The New Dallmeyer F/0.99 Ciné Lens

PROBABLY the most remarkable optical achievement of the past year in photographic equipment is the successful production of an F/0.99 ciné lens of one-inch focus especially designed for 16-millimeter motion-picture cameras. The famous optical firm of Dallmeyer, London, England, has done that which was thought to be virtually impossible twenty years ago. This enormous aperture places in the hands of the amateur kinematographer a wonderful instrument. Movies may now be made under practically any lighting-conditions, summer or winter. The aperture F/0.99 represents an increase in speed of 1,200 per cent. over the normal F/3.5 lens, according to the manufacturers.

The new Dallmeyer F/0.99 lens is supplied in a beautifully made mount which incorporates a micrometer focusing-mount that is engraved in feet. Inside the lens-mount, and between the front and back component, is placed the iris diaphragm, which is controlled by a ring entirely encircling the lens-mount. The apertures engraved are F/0.99, F/1.4, F/2, F/2.8, F/4, F/5.6, F/8, and F/11. The lens is well sunk in its mount and incorporates in itself an efficient lens-hood. The accepted standard setting of .690 inches is maintained, so that this lens may be used on Filmo, Victor, and Auto-Kinecam and other amateur cameras.

THE NEW DALLMEYER F/0.99 LENS
FOR AMATEUR CINÉ CAMERAS

It is difficult to realise that Dallmeyer's new lens has an aperture as large as its focal length—one-inch aperture and one-inch focal length. Perhaps this optical achievement might never have been possible had not the 16-millimeter movie camera proved to be such a success, technically and artistically. Without a question, Herbert & Huesgen Company, 18 East 42d Street, New York City, are entitled to feel enthusiastic over this new Dallmeyer product. They will be happy to answer inquiries and to send descriptive matter to those who write for it.

## The New Printometer

A MACHINE that exercises artistic judgment was displayed recently at the annual convention of the Master Photo-Finishers of America in Washington, D.C. This newest phenomenon of the mechanistic age looks through a photographic negative with an electric eye, and then stamps on the edge of the film the grade of photographic paper the picture should be printed on, as well as the degree of light that should be used in printing it.

The result of the invention, photo-processing experts who attended the convention say, will be to improve the quality of pictures that amateur snapshooters get back from their photo-finishers. Heretofore, the judging of negatives has depended on the skill of individual workers, which has been heavily taxed by the wide variation in negatives made by amateur photographers under many different light-conditions.

The new machine, which is called a "printometer", was the idea of Roland J. Wilkinson, a young photo-finisher of Jackson, Mich., who is a vice-president of the Master Photo-Finishers Association. Difficulty in obtaining skilled judges of picture-quality for his own business caused him to cast about for a better means of accomplishing that important phase of photo-finishing work. Conceiving the underlying principle of the machine which was demonstrated today, Wilkinson shared his idea with Joseph W. Myers, also of Jackson, an inventor, who made a model embodying it.

This model Wilkinson took to the Eastman Kodak Company, Rochester, N.Y., where photo-mechanical experts perfected the machine to a stage in which, with a few simple manual motions, an entirely unskilled operator can judge negatives satisfactorily.

In its final form, the machine looks like a radio-set on a small writing-desk. Into the flat part of the desk an opaque square of glass is set, with a beam of light shining up through it and into a tube projecting above it, which is the eye of the apparatus.

Into the beam of light the operator slips the negative to be judged. He moves it so that the light shines first through the most transparent part of the negative and then through the densest part, and he notes the two resulting readings of a meter on the "radio-set".

Then the operator manipulates a dial resembling that on an automatic telephone, with a notch at each number to permit the fingers to turn it. He puts one finger at each of the two numbers corresponding to the two readings of the meter and swings the dial first to the left and then to the right. The negative comes out with nicks on the side indicating which of four grades of contrast to select in the printing paper to be used and how long to expose the paper to the light in printing.

A negative with sharp contrasts of light and dark areas makes its best print on a soft paper, and a soft negative prints best on a contrasty paper. Printing-time needs to be proportional to the density of the film as a whole. It is the difficulty in estimating these factors of good photographic printing that the new machine overcomes.

The picture-judging device has the advantage, not only of fixing the quality of the resulting prints with accuracy, regardless of whether the amateur snapshooter gave his pictures too much or too little exposure, but also of ensuring that prints resulting from any negative shall be of the same quality every time new prints are made. No longer will enthusiastic amateur photographers find, when they order more prints of a favorite picture, that the extra prints are of a different quality from the first one because they have been printed with a different length of light-exposure or on paper of a different contrast.

The basis of the machine is a selenium cell, sensitive to light, which operates the pointer on the meter in proportion as much or little light falls upon the cell respectively through the transparent or dense parts of a negative. Operation of the dial first punches the film to mark printing-time, with the number of punches corresponding to ten possible degrees of printing-time, as indicated by the selenium cell's reading of the least dense part of the film. Which of the four grades of contrast is to be used in the paper to print on is computed by the machine by subtracting the reading for the minimum density of a negative from the maximum and automatically dividing the range of light into terms of the proper contrast of printing-paper, and punching the result on the film.

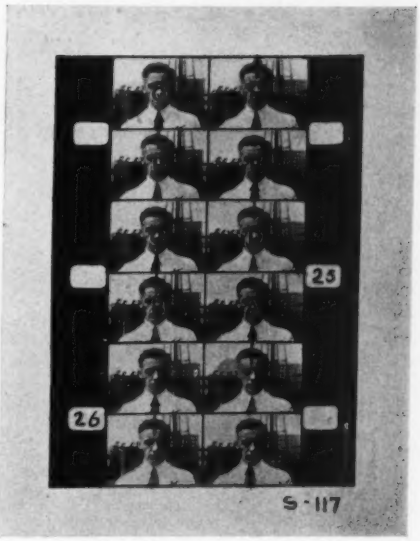
A test of the printometer, operated by a novice, showed a greater percentage of perfect prints from a large set of negatives than were obtained by a highly skilled photographic printer judging the necessary printing-time and contrast by eye, which is the present method. Even when the skilled printer was allowed to make several prints from each negative in an effort to get the most perfect pictures possible, the accurate judging of the machine outdid that of the person.

## The New Kodel Homovie Camera and Projector

THROUGH an invention which enables motion-pictures to be made laterally as well as horizontally upon the same film, it is claimed that the cost of motion-pictures for the home has been reduced seventy-five per cent., bringing home motion-pictures within reach of the great mass of people. A family in almost any circumstances may make motion-pictures of the daily events that revolve around the family-group and preserve an active, animated record of life at a cost that is far less than the ordinary "still" pictures.

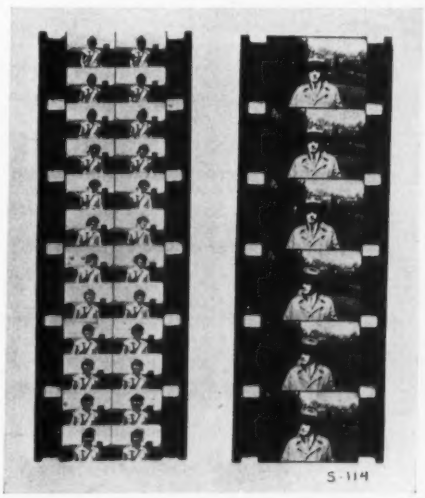
The announcement of this forward step in home-entertainment, to take its place along with radio and the automobile, was made by Mr. Clarence E. Ogden, President of the Kodel Electric & Manufacturing Company, pioneer radio-manufacturer of Cincinnati, Ohio. Realising that the public welcomed any form of home-entertainment and appreciating the fact that motion-pictures, together with "talkie" devices would enable any home to keep a permanent record of the history of the family, to pass down from generation to generation, provided the cost of operating a home motion-picture camera could be reduced, Mr. Ogden, with outstanding motion-picture engineers, started work more than three years ago to develop a new motion-picture principle of operation.

This principle, perfected in Kodel laboratories last year, involved an expenditure of $200,000 for laboratory, machinery and special equipment, it is stated. At one time more than ten engineers were working on the problem. However, in July, 1928, the basic idea was conceived. A suggestion was made that inasmuch as the sixteen pictures per second, as made by all types of motion-picture cameras, and projected at the same rate of speed, were all made in a single




ARROWS SHOW MOTION OF FILM IN FRONT OF CAMERA LENS

horizontal movement, or lengthwise of the camera, this automatically handicapped the reduction in cost of operation because the cost of the film is determined by length, having a fixed width of 16 millimeters. Therefore, it was decided, if pictures could be made crosswise as well, it would enable the operator to make four pictures where formerly only one picture was




COMPARISON OF HOMOVIE FRAME (LEFT) AND 16 MM FRAME (RIGHT)



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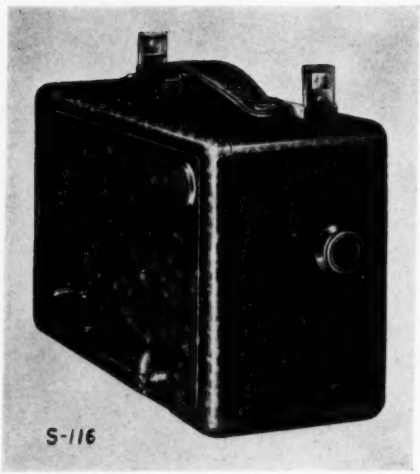



THE HOMOVIE CAMERA

made, in the same amount of space, or four vision-impressions where only one impression had been obtained before.

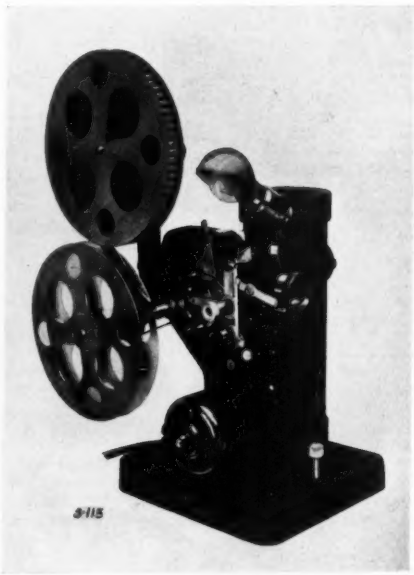
The new camera is known as the Homovie, and a projector which can project pictures made by the Homovie Camera as well as pictures made by any other type of 16-millimeter camera, is known by the same name. Registration of this trade-mark has already been allowed by the U. S. Patent Office, according to Mr. Ogden, as well as each of the forty-eight individual states. The necessary mechanism for accomplishing this increased efficiency of the camera and reducing the cost of operation seventy-five per cent. is exceedingly simple. The two movements, moving the film across the front of the camera as well as horizontally, alternate with each other, so that the composite movement of the film-and-shutter mechanism produces a series of individual pictures arranged upon the film.

This new development also heralds the showing of motion-pictures in broad daylight. By the creation of what is known as a Day-Lite Recreator, the picture is projected against a mirror at an angle of forty-five degrees, which in turn is shielded from light and reflects the picture through a translucent glass-screen, reproducing the picture in all the fine detail in daylight, without necessitating the darkening of the room. This is a revolutionary achievement which may have a far-reaching effect upon the showing of motion-pictures in theatres.

Motion-picture and camera enthusiasts who have witnessed private showings of the Kodel Homovie, as long as six months ago, expressed amazement at the saving this new device brings to the public. The popularity of motion-pictures in the home, admittedly one of the most popular forms of home-entertainment, has been somewhat curtailed and made an exclusive pleasure for the man of means until the perfection of the Kodel Homovie. Where a man or woman desired to go on a vacation tour, or make a general view of something of interest, it was necessary to buy from three to twelve rolls of film, costing $6 per roll. Today, one roll of the Homovie makes as many pictures as four rolls of the former type of film. Manufacturers of film throughout the country have taken a keen interest in the development of this new camera and prophesy that the Homovie will do for motion-pictures in the home what the Ford automobile did for people of moderate means. The films used in the Kodel Homovie are standard in every way, may be bought from any photographic dealer throughout the world, and are manufactured by several different companies.

This new motion-picture camera for the home enjoys all the advantages of other types of motion-pictures, color-photography, reversible, negative or Panchromatic films, and can be loaded easily in broad daylight. The camera is convenient to carry and is 8½ inches long, 3½ inches wide and 5 inches high. The operation is simple, with a view-finder through which the operator looks at the scene he wishes to register, presses a button that releases a spring and automatically the horizontal and lateral motion begins, in perfect synchronisation, making sixteen pictures per second, operated by a spring motor constructed from Swedish clock-spring steel.

The projector, made to project films made by this new camera as well as the longer, more expensive type films photographed by other types of cameras, contains a 250-watt projection bulb and concentrated filament, an accurately, specially ground 1⅛-inch silvered spherical mirror, carefully focused, which reflects this intense light through a triple-lens aspheric condensor, producing a powerful beam which, in turn, is reflected by means of a mirror through the film, objective lens and upon the screen. One of the remarkable features of this projector is that the operator may stop the projector at any time, leaving a large still-picture standing on the screen. A special heat absorbing glass-shutter prevents the film from breaking or blistering. The entire device, as well as the film, is fireproof.




THE HOMOVIE PROJECTOR

# HERE, THERE AND EVERYWHERE

**To ensure publication, announcements and reports should be sent in not later than the 5th of the preceding month.**

## Photo-Era Trophy Cup Scores

As announced in our December, 1929, number, we shall report PHOTO-ERA TROPHY CUP scores, in this department, beginning with this issue. The Editor has expressed the desire to have his corner all to himself; and so, as a Christmas-gift, his wish has been granted. "The Editor's Corner" will henceforth be his to fill as he thinks best.

In referring to the Water-Scene Competition, several months ago, we spoke of its increasing popularity and the marked high quality of the prints submitted. The competition just closed and judged was one of the largest and best that we have had in several years. Those who received an Honorable Mention in the competition which closed November 30, 1929, have every reason to feel that they achieved something worth while. The matter of selecting the prize-winners was unusually difficult, and, in some cases, it was like splitting hairs to give one picture preference over another. It is to be expected that the judges' verdict will be criticised, no matter to whom they may award the prizes. Yet they made a sincere attempt—human though they may be—to recognise merit and to give credit where it was due.

In the Advanced Competition, Hugo Raeth of the Fort Dearborn Camera Club won First Prize. The Second Prize was awarded to Charles C. Blanchard, not a club member. The Third Prize was won by L. H. Longwell, another member of the Fort Dearborn Camera Club. In the Beginners' Competition the First Prize was awarded to Clair A. Brown, and the Second Prize to Sorah J. Kharegat, neither of whom is a camera-club member. With regard to Honorable Mentions, the Fort Dearborn Camera Club received nine; the Photographic Club of Baltimore, eight; the Cleveland Photographic Society, five; Episcopal Academy Camera Club, three; Chicago Camera Club and Syracuse Camera Club, one each. We extend a hearty welcome to the members of the Episcopal Academy Camera Club, which at the very first attempt scored one and one-half points. It is with regret that the name of the Seattle Camera Club is removed from the list of contestants. This club was the first to win the TROPHY CUP and for the past few years has participated every month in our competitions. May Seattle soon again be represented by a camera club! According to our records, the standing of the clubs, as of December 1, 1929, is as follows:

| | |
|---|---|
| Fort Dearborn Camera Club | 19 |
| Photographic Club of Baltimore | 12 |
| Cleveland Photographic Society | 5½ |
| Brooklyn Institute | 2 |
| Episcopal Academy Camera Club | 1½ |
| Syracuse Camera Club | 1½ |
| Toronto Camera Club | 1½ |
| Chicago Camera Club | ½ |
| Photographic Society of Philadelphia | ½ |
| Schenectady Camera Club | ½ |

[There is room for more camera clubs to enter the PHOTO-ERA TROPHY CUP RACE. There is a hearty welcome to all.—EDITOR.]

## New Hampshire Photographers Receive Full Credit

WHEN told that originals for the pictures in the booklet, "New Hampshire, Land of Scenic Splendor", were furnished by photographers of this State without charge, an official of the publicity department of another State expressed surprise. "We've never been able to get such co-operation as that from our photographers", he remarked.

It is a fact that funds at the disposal of the New Hampshire Department of Publicity never would have permitted the successive editions of the "Scenic Booklet" and the wide distribution of the publication, without this help from the photographers of New Hampshire. Otherwise, the cost would have been prohibitive. The opinion frequently expressed that this booklet is the best of the kind ever issued anywhere is, incidentally, as much a compliment to the photographers who gave the pictures as to the Publicity Department itself.

Recently, it was suggested by a caller in the Publicity Department's office that framed pictures of New Hampshire scenes, pictures made by New Hampshire photographic artists, ought to be used more freely for gifts, at Christmas time and at other seasons when gifts are made. It was added that they are appropriate for almost any occasion and surely would be appreciated by every resident or former resident of New Hampshire.

"Examples of this New Hampshire photographic art on the walls of the publicity offices is proof enough of the exceptional quality of the work done in the studios of the State", the visitor remarked in conclusion.

Secretary Tuttle of the Department of Publicity himself has wondered why New Hampshire mercantile and industrial houses do not use New Hampshire views on their calendars and in their other advertising matter, rather than the pictures they do use, which are, many times, scenic bits from some other part of the country or even from some other part of the world.

## Reviving the Custom of Exchanging Photographs

A CARD originated by Charles D. Kaufmann, a member of the advertising committee of the Photographers' Association of America, is being printed and distributed in large quantities by the association for the purpose of increasing the sale of photographs.

It is a beautifully printed card on which the reading matter is: "My thought in sending you this photograph is that I would treasure one of you." At the bottom of the card is space for the signature of the person sending the photograph.

The card was tested by Mr. Kaufmann and was found to work successfully. When photographs were sent out and a card inclosed with each, the percentage of exchange photographs was very high.

These reminder cards will be put into the hands of members of the association with the request that they place them in every package of photographs sent out, so that any person who gives photographs may request



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in exchange the photographs of those to whom they have given.

Some persons have a reticence about sending their photographs to relatives and friends. When they receive a photograph and a card, inviting an exchange, the reticence, of course, is swept away, and they are almost put under obligation to favor the friends who have favored them with photographs.

It is hoped that this exchange or reminder card will have the effect of doing away with the reserve that many persons have had.

### Seventeenth Annual Pittsburgh Salon

THE Seventeenth Annual Pittsburgh Salon of Photographic Art will be held at the Art Galleries of the Carnegie Institute, March 22 to April 20, 1930, under the auspices of the Photographic Section of the Academy of Science and Art. The last day for receiving prints; foreign, February 8; U. S. A., February 22. Entry-forms and further information may be obtained by addressing B. H. Chatto, Secretary, Pittsburgh Salon, 1300 Milton Avenue, Pittsburgh, Pa.

### The New DeVry Camera Exchange Offer

WE had virtually assumed that the automobile dealers were the only ones who offered an exchange of an old car toward a new one. However, the Q. R. S. DeVry Corporation have taken a page from the book of experience of the automobile industry and have announced that they will allow $5 through their dealers to any person who brings in his or her old camera—no matter how old or what make—this allowance to apply on the purchase-price of the new DeVry still camera. This camera utilises the standard-size motion-picture film and makes forty exposures at one loading. Furthermore, it is moderately priced and thoroughly efficient. This experiment in photographic merchandising will be watched with interest by customers and dealers alike.

### Vitacolor Expands Service

THE popularity of Vitacolor has permitted the manufacturers to go into production on all manufactured parts and to handle film in quantity so that lower prices are made possible. Furthermore, an expansion program for branches, each with a first-class laboratory for processing Vitacolor films, has begun; and one is situated at 11 West 42nd Street, New York City; and the other at 610-612 Baronne Street, New Orleans, La. The main office is situated at 207-209 North Occidental Boulevard, Los Angeles, California. Users of Vitacolor products will doubtless find these three well equipped offices of service.

### Demonstration of Surgical "Talkies"

MEMBERS of the Royal Society of Medicine in London saw and heard what is perhaps the initial attempt to record on sound-film a major surgical operation. Sir John Thomson-Walker, of the King's College Hospital, was photographed as he worked over an actual case. Surgical experts of the Royal Society were greatly impressed by the demonstration. Sir John made this statement after viewing the film: "By this method we could show a large class of students half a dozen operations in an afternoon. I feel sure that teaching in hospitals and universities will be much supplemented by this method."

### The Avenir Le Heart Course in Coloring

THE coloring of photographs continues to attract many amateur and professional photographers. It appeals especially to men and to women with artistic abilities. Furthermore, a correctly colored enlargement is not only likely to be much improved, but it commands a higher price if it is to be sold. There are many excellent courses of instruction in the coloring of photographs. Some are more expensive and comprehensive than others, and it is for the individual to determine how much time and money can be invested in the instruction.

We have recently looked over the course in coloring which Avenir Le Heart, 544A Castro Street, San Francisco, is offering at the moderate price of five dollars for ten lessons and free criticism and correction of the ten lessons. There is a course for portraits and one for landscapes. We believe that in these lessons a sincere attempt has been made to fill a need for instruction in coloring which would be easily understood, thorough enough and practical enough so that creditable work could be done by those with limited artistic training. No alluring promises are made with regard to financial or artistic rewards to be obtained by taking these lessons. It appears to be a clear statement of essentials, with the success or failure of the attempt resting squarely on the work done by the student. We believe that those who are willing to work according to directions will find the courses prepared by Avenir Le Heart instructive, practical, and satisfactory. There is a quiet common sense about the lessons which is refreshing in these days of much "crying aloud from the housetops".

### Brooklyn Institute—Photographic Department

AN unusual two-man show was held recently in the Brooklyn Institute Salon. Seldom, if ever, have we seen such masterful pictorial treatment of purely commercial subjects.

Unlike most commercial photography, every commercial picture in this exhibit—for it included a small percentage of exquisite pictorial subjects—stood on its own feet, in that it needed no text to explain its appeal nor to justify its content and composition. Furthermore, in selling their respective articles or services, these photographs first of all sold themselves.

Among the most difficult of photographic feats in this exhibit was the realistic rendering of the texture of a paper-thin, colorless, utterly transparent material widely used to wrap candy, foods, and other articles of commerce. Believe it or not, so clever was the composition, as well as the technique, that while the eye was attracted first of all to this picture by the bewitchingly beautiful girl holding some of this invisible stuff, the eye was soon drawn to and held by the extraordinary play of lights in the article advertised.

But even this, and other equally difficult technical accomplishments, by contrast, lost in interest before the spectacular examples of multiple exposure and violent fantastic distortion which bore witness to the ingenuity and resourcefulness of these two successful photographers, who seem to combine the skill of highly-trained technicians, the commercial sensitiveness of dyed-in-the-wool advertisers, and the artistry of born pictorialists.

The conservativeness of this report will be ackowledged by all those who have seen the work these gentlemen do. The exhibitors were Lejaren à Hiller and Valentino Sarra, A.R.P.S.; both are with Underwood and Underwood of New York City.

Often a club expects, let us say, fifty people to turn

out for a special meeting or picnic, but only thirty show up. Well, we expected about thirty for our annual dinner last month, but fifty showed up—and hungry, too! Fortunately, our entertainment-committee had had the good judgment to pick out a place that included forethought and preparedness in its stock in trade; so that we all left the "Betty French" with thoroughly appeased hunger—which is saying a lot, too, for it is very easy to eat a lot of the kind of food Betty French serves.

Isn't it more likely that an enthusiastic amateur will go to a class where future professionals are being instructed, than for professionals or future professionals to attend a class for amateurs? Yet our advanced class in "art and photography", under the direction of Nicholas Haz, F.R.P.S., has attracted the largest percentage of practising and prospective professionals that we have ever had. Incidentally, the enrollment really strains the physical limits of our present classroom, and we will soon have to do something about it.

Not often—fortunately—is such a greeting as this one in order. But we wish to express our best optimistic wishes to the members of the late Seattle Camera Club. Our relations with them have been so cordial that we feel as though many of our own membership had dropped out. We hope that Dr. K. Koike, the club's chairman and leading spirit, will find that the club was, after all, one of those things which we mortals are prone to take for granted, and was not appreciated until it was gone. And so we prefer to believe that Seattle will miss her Camera Club and soon reorganise one under the able and altruistic leadership of Dr. Koike.

MANUEL MUNIZ.

## Graf Lens Co. Co-operates with Watson's Television

A NEW and improved Television disc, which was suggested by P. F. Pfeil of the Graf Lens Division of the Q. R. S.-DeVry Corporation, has been adopted by Albert H. Watson in his Television apparatus.

The disc, which reflects the image to the audience, as originally designed by Mr. Watson, required 48 individual concave mirrors, each individually attached and adjusted by three screws. Mr. Pfeil suggested that the mirrors be made all in one piece on a slitted disc of monel metal. The individual adjusting of the 48 mirrors was accomplished by forcing the slitted edge of the disc down into a cam-arrangement below, thus automatically and quickly giving the necessary increased tilt to each of the successive mirrors. The monel mirror will not tarnish, and permits a great saving in manufacturing and assembly cost.

## Mr. Franke Enjoys Visit to United States

MR. PAUL FRANKE, of the well-known factory of Franke & Heidecke, Braunschweig, Germany, has returned to Germany recently after a short visit with the United States distributor, Burleigh Brooks.

This was Mr. Franke's first visit to the United States, and he reports a very interesting stay in New York City, as well as a pleasant motor-trip as far as Portland, Maine. It is said that after leaving Boston, Mr. Brooks, who was driving, took the wrong road out of Boston on his way back to New York, and to the great surprise of the party after driving for over fifty miles it was discovered that they were somewhere in Maine, instead of in Providence, R.I. Here's hoping that nothing serious happened to Mr. Brooks' sense of direction!

It will be recalled that Franke & Heidecke are the makers of those wonderful precision stereo cameras, the Heidescope and Rolleidescope.

Recently this factory brought out the new rollfilm reflex camera, the Rolleiflex, which has been so much talked of. This camera proved the outstanding achievement of the factory for many years, and it is now a popular success the world over. Notwithstanding the fact that an addition has already been made to the factory to take care of its orders—and Mr. Franke reports production on day and night shifts—deliveries are still not fully adequate, and a still further addition to the factory is now being rushed to completion.

## New F/3.5 Lens for DeVry Still Camera

DEVRY Still Camera users will be interested to know that a new Graf-DeVry 2-inch F/3.5 Anastigmat Lens, designed especially for the person desiring the more difficult and unusual pictures, has been added to the DeVry Line of motion and still-picture equipment. The new F/3.5 lens is interchangeable with the standard lens furnished with the DeVry Still Camera.

In addition to the lens' unusual speed it is equipped with a wide variety of stops and accurate focusing adjustments which aid the amateur in obtaining unusually fine pictures.

The DeVry Still Camera is unique in that it shoots 40 pictures to a loading and uses standard 35 mm. motion-picture film. Enlargements of any size may be made from the negatives which are twice the size of a motion-picture frame.

## Prices Reduced On DeVry Beaded Screens

PRICES on the popular home model DeVry Beaded Screens have been substantially reduced, according to an announcement of the Q. R. S.-DeVry Corporation. All Tripod DeVry Beaded Screens were reduced $5.00 making a new price range from $20.00 to $30.00 on this model.

A new screen has been devised which sits on a table or chair. It is supported by a small standard with protecting rubber pads. The table model takes the place of the DeVry box screens. After using, the screen folds into a self contained metal case which occupies a minimum of space. Prices on Table Models are $13.00 and $15.00 according to size. No change has been made in the DeVry Frame Screen.

The reflecting surface of all types of DeVry Beaded Screens is made by embedding millions of tiny luminous glass-beads into three coats of filler and six coats of enamel on a strong backing of pre-shrunk material.

## Again We Welcome the "Wellcome" Handbook

THERE is nothing in photographic books quite like the "Wellcome" Photographic Handbook. It serves, instructs, and encourages beginners and experts alike. It has met the test of years of successful accomplishment. The 1930 edition of the "Wellcome" Photographic Exposure Calculator, Handbook, and Diary is a worthy successor to the many previous editions of this popular handbook, which Burroughs, Wellcome & Co., 9 East 41st Street, New York City, publish annually.

The text has been completely revised and a number of additions made to the exposure-tables. This compact handbook, neatly bound and complete with pencil, can be carried easily in the pocket, ready for instant reference. The information it gives is the result of many years' practical experience and is equally useful



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to the expert and the beginner. Excellent examples of the fine quality obtainable in difficult subjects by developing the negatives with "Tabloid" "Rytol" are shown in the frontispiece illustrations, "The Woolworth Building, New York" and "T. R. H., the Duke and Duchess of York, leaving Holyrood Palace."

Instructions are in simple nontechnical language and provide a reliable guide from the moment of exposure to the finished print. The numerous tables, figures, and other data will be found invaluable. The memoranda pages provide ample space for personal records of exposure, subjects, stops, and so on.

Four editions are issued: Northern Hemisphere and Tropics, Southern Hemisphere and Tropics, Australasia and Tropics, and United States of America.

### Val Linhof

BURLEIGH BROOKS, the United States agent for the Linhof Cameras, reports the recent death of Mr. Val Linhof, the founder of the Linhof factory, after a long illness. Mr. Linhof was highly esteemed as a thorough exponent of the old school of German precision instrument makers who have done so much to make this country famous for high-grade cameras. The business will be carried on as usual under the direction of other members of the family.

### Enlargement Is Record in Size

WHAT is said to be one of the most pretentious enlargements ever made from a small photograph is a stage backing used in "Peacock Alley", Mae Murray's first all-talking starring motion-picture, now being filmed by Tiffany-Stahl productions.

The original picture, made with a small Eastman Kodak, is of a fashionable New York apartment building. This original 5 by 7-inch photograph has been enlarged to an enormous life-sized setting 22 by 40 feet, the work being done in a Hollywood photographic studio.—*Los Angeles Herald.*

### Area Devastated by Typhoon Photographed

Two amphibian planes assigned to the Sixth Photo-Section at Nichols Field, P.I., were recently taken off on a mission to determine the area swept by the violent typhoon which visited the Islands and to make aërial photographs of the conditions. One of the amphibians was piloted by Major W. G. Kilner, Air Corps, accompanied by Governor-General Davis as passenger, while the other was piloted by Lieutenant Bob Nowland, with Master Sergeant Klutz as photographer and Technical Sergeant Lee (pilot) as observer. A number of aërial photographs were made at Infanta and vicinity, this territory being the hardest swept by wind and water.

### The P. A. of A. $20,000 Golden Anniversary Prize Contest

THE council of the Photographers' Association of America recently approved the plans made by the anniversary committee for a prize contest to be held in its fiftieth anniversary year. Prizes will be awarded to the most lovely mothers and the most attractive children in the United States and Canada.

The purpose is not to make awards for the best professional photographic work, but for the fine qualities of motherhood and childhood as shown in photographs.

The contest will open February 20 and close May 10, 1930, the day before Mother's Day. It will be tied up with Mother's Day. The committee estimates that at least 100,000 prints will be entered in the contest in the United States and Canada.

In addition, photographers will hold similar local contests during the same period, and in some cities will award prizes for the best essays on "Why I Want a Photograph of My Mother" and "Why I Want a Photograph of My Child".

The Association is preparing advertising matter and other material for the purpose of making this contest one of the greatest ever held in America.

PRIZES FOR THE CONTEST

*"Most Lovely Mother" Prizes*

*United States-Canada*

GRAND PRIZES

| | |
|---|---|
| 1st prize | $1,500 |
| 2d prize | 500 |
| 3d prize | 250 |

*United States Prizes, Six Regions*

| | |
|---|---|
| 6 $100 prizes | 600 |
| 60 $50 prizes | 3,000 |
| 132 $25 prizes | 3,300 |

*Canadian Prizes*

| | |
|---|---|
| 1 $100 prize | 100 |
| 10 $50 prizes | 500 |
| 10 $25 prizes | 250 |
| Total "Most Lovely Mother" Prizes | $10,000 |

*"Most Attractive Child" Prizes*

*United States—Canada*

GRAND PRIZES

| | |
|---|---|
| 1st prize | $1,500 |
| 2d prize | 500 |
| 3d prize | 250 |

*United States Prizes, Six Regions*

| | |
|---|---|
| 6 $100 prizes | 600 |
| 60 $50 prizes | 3,000 |
| 132 $25 prizes | 3,300 |

*Canadian Prizes*

| | |
|---|---|
| 1 $100 prize | 100 |
| 10 $50 prizes | 500 |
| 10 $25 prizes | 250 |
| Total "Most Attractive Child" Prizes | $10,000 |
| Total Prizes, Both Contests | $20,000 |

RULES OF THE CONTEST

1. The contest is open to any resident of the United States and Canada, except persons or members of the families of persons connected in any way with the photographic industry.

2. Any photograph made by a professional photographer, after February 20, 1930, shall be eligible for competition. An entrant may submit as many of such photographs as desired.

3. Each entry must be accompanied by an entry blank, properly filled in. If more than one print is submitted by an entrant, each print must be accompanied by a separate entry blank. Entry blanks may be obtained from your local photographers, or by filling in and mailing the attached coupon to Contest Department, Photographers' Association of America, 2258 Euclid Avenue, Cleveland, Ohio.

4. Combination or group pictures of mother and children shall not be eligible for either contest. Each entry must be of a single figure, either mother or child.

5. Photographs of mothers may be entered only by the subject herself, or with her written consent; photographs of children may only be entered by parents or guardians, or with their written consent.

6. Each prize-winning photograph becomes the property of the Photographers' Association of America, whose right to the use thereof for advertising, publicity, and exhibition purposes is acknowledged by the entrant. All other prints will be returned, if so requested on entry blank.

7. Any one entrant may receive only one prize. National prize winners are not eligible for sectional competition.

8. Size, style, or quality of photograph shall not be given consideration by the judges. Awards shall be made solely on the appropriateness of the subjects as "the loveliest mother" or "the most attractive child".

9. In the event of a tie, for any award, each tying contestant shall receive the full amount of that prize. The decisions of the judges shall be final.

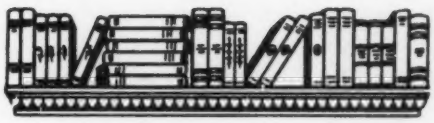
10. All entries must be mailed to the Contest Department, Photographers' Association of America, 2258 Euclid Avenue, Cleveland, Ohio, and must be in the mail and bear a postmark not later than May 10, 1930.

### "Autogravure Stencils and How to Make Them"

It is becoming almost impossible to keep up with photography and the number of fields in which it is playing a vital part. Through the courtesy of the Tri-Chromo-Gravure Company of America, 775 Sixth Avenue, New York City, we received a book written by A. Mario Gomes entitled, "Autogravure Stencils and How to Make Them". It describes in detail a new process which enables one to put drawings, sketches, and half-tone photographs on stencils, from which practically unlimited printing may be done. The book explains particularly the making of these stencils by means of photography. Our readers who enjoy bromoils, gums, and other special applications of these processes will doubtless be interested to obtain more information and to see how the methods described by Mr. Gomes may be applied in a number of directions. The book is practical in every way and is, in fact, a detailed instruction-book, filled with diagrams, illustrations, and formulas, all of which seem to be reproduced by the method which they describe. Apparently the author has endeavored to encourage true artistic craftsmanship, and we heartily commend his constructive effort.

### Dr. Max Thorek Wins His F. R. P. S.

We were closing the very last page of this issue when a telegram arrived with the good news that Dr. Max Thorek, the internationally known pictorialist of Chicago, had received the coveted Fellowship in the Royal Photographic Society of Great Britain. We take especial pleasure in recording this bit of news, even though briefly, because we have been honored by Dr. Thorek's friendship for a number of years and we rejoice that his untiring effort to reach the heights in pictorial photography has met with the recognition it deserved. An outstanding fact in connection with Dr. Thorek's pictorial progress is that he believes in walking with, not over, less experienced workers. In helping others he has reached the top.



## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

The American Annual of Photography, 1930. Volume XLIV. Edited by Frank R. Fraprie, F.R.P.S. 272 pages and 179 Pictorial and other illustrations, including numerous diagrams, tables and formulas. Price, paper, $1.50; cloth, $2.25. Boston: American Photographic Publishing Company.

The 1930 edition of the "American Annual of Photography" will attract and hold the attention of amateur and professional photographers. There is pictorial and text material which merits study. Thirty-two pages have been added to the 1930 edition, and this permits including the data and critical comment pertaining to the ninety-seven pictorial illustrations. "Our Illustrations", by Frank R. Fraprie, F.R.P.S., will be found to be one of the most helpful features of the new annual. There is an ever-increasing demand by amateurs and professionals alike to learn how pictures are made and what equipment and photomaterial is used. There is variety in the pictorial illustrations. Nearly all branches of photographic work are represented. There was a time when we were under the impression that the "American Annual of Photography" was intended to include the best pictorial efforts of American workers only. That is, it was to be representative of American pictorial photography and photographic progress in the United States, just as other countries have their representative annuals of their own photographic activities. However, apparently the trend today is to make every photographic annual an international instead of a national publication. Nevertheless, we believe that many would like to see an annual which presented the best work done by American photographers in all branches of photography during each calendar year.

The departments "Who's Who in Pictorial Photography, 1928–'29", "American Photographic Societies" and "American Annual Formulary" are of much interest and value. Typographically, the 1930 annual is well done, the articles are designed to be helpful to many classes of photographers and, altogether, we believe that the new annual deserves a cordial reception.

Deutscher Kamera Almanach, 1930. Volume XX. Edited by Karl Weiss. 266 pages and 160 photographic illustrations, with one in color. Price, paper, $2.00. Berlin: Union Deutche Verlagsgelellschaft.

This German photographic annual is filled with interesting pictures and articles which deal with all branches of photographic work. Pictorial illustrations are drawn from leading pictorialists. The text-matter is all in German; but even those who cannot read German will find much pleasure and profit in studying the many excellent pictures which are beautifully reproduced in inks of several appropriate tints to suit the subject. Doubtless, there are many of our readers who can read German; and to these we can recommend this annual with every confidence that they will enjoy it. The book is well printed and attractively arranged by the publishers and editor who deserve much credit for their good work.



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# THE AMATEUR KINEMATOGRAPHER

HERBERT C. McKAY, F.R.P.S.

## Metropolitan Club Notes

THE Metropolitan Motion-Picture Club of New York recently held the first meeting of the new season after a summer of inactivity. The meetings, which are held in the clubrooms of the Camera Club of New York, through the splendid courtesy and co-operation of that organisation, are well attended as a rule; but the first meeting of the new season was even more satisfactory in this respect than usual.

The subject of the evening was "Exposure". The writer gave a brief talk upon the subject, following which Mr. Russell Holslag, Technical Consultant of the Amateur Cinema League, very ably carried the same subject into more practical detail and expressed himself in a manner which was in full accord with the writer's ideas.

Although this cannot in any manner be a stenographic report of the discussions of the evening, the subject-matter was about the same as will be given in the following paragraphs.

In motion-picture photography, practically everything has been made automatic, except exposure. As we have seen, the camera used in this work has been simplified to the *n*th degree, and only the determination of exposure has been left to the judgment of the amateur.

Exposure is truly quite a problem. In the present season we have three general types of subject; *i.e.*, landscape without snow, in which the greater part of the coloration is neutral, brown, gray-green, and earth colors; landscape with snow, marked with the extreme contrast, the blue shadows, and the difficulty of giving proper exposure to a foreground brilliantly illuminated and without detail, while also correctly exposing the shadows and dark tones of a log-cabin in the middle distance. Then, of course, we have the third class, interiors.

Each of these classes, although set apart from the others, of itself presents almost an infinite number of problems. For example, let us take class one, the landscape without snow.

This may be an open field, with the moving figure well placed in relief against contrasting background and sky. There is little forest-growth about, perhaps none at all. The day is clear and crisp and the sun brilliant. In this case, exposure would be about normal for exterior sun. However, suppose that this is a hazy Indian summer day—a sleepy, drowsy day, with a haze so pronounced that even familiar scenes take on an appearance of unreality. The exposure would vary. Suppose, again, that this scene is to be made about four o'clock in the evening. We might not notice that the sun is getting low; but, in fact, at this time of the day and year, the light is distinctly low in actinic power. Then, if we add undergrowth to the scene, if we are legally "shooting" deer in a wood, we find other factors of lighting involved. Briefly, we are faced with a different problem for each condition; yet, with the exception of the distinctly hazy atmosphere, the eye would tend to give us a uniform light response stimulus for all conditions; and, even if we deliberately pause to study each factor, the eye cannot be relied upon to alter its own spectral sensitivity to that of the particular emulsion being used!

In the case of the snow-scene, we have another set of conditions. We want to get sufficient exposure to bring out the fullest detail in the deep shadows, yet we do not wish to block the delicate detail in the snow-shadow. Proper photography of a snow-scene certainly should be sufficient reason to regard any photographer as a master of his art, yet the amateur—rather the tyro—blithely pushes the button and relies upon the gods of good luck to do the rest! This cannot be done. When the film passes through the camera-gate, the exposure has been registered for good or for bad without possibility of change.

Finally, we have interior work. We have had considerable discussion of this phase of work recently, but the effects of artificial lighting upon exposure have not been fully treated as a distinct factor of success or failure.

In considering exposure by artificial light we have several factors to consider: (*a*) the type of bulb or other illuminant used, (*b*) the line-pressure or voltage used, (*c*) the nature and color of the subject, (*d*) the nature, color, and distance of the surrounding walls, and (*e*) the distance from light to subject.

(*a*) Most artificial lighting is now accomplished by the aid of incandescent bulbs. These are of several types: the usual house-illuminating type, floodlight type, normal-pressure projection type, and high-pressure projection type. The efficiency increases in the order given, the high-pressure projection being the most efficient. The efficiency of the bulb depends upon (1) wattage, (2) ratio of rated voltage to voltage used, (3) initial lumens generated, and (4) type of reflector used. Naturally, in a given type the initial lumens generated and wattage consumed have a distinct relation, the lumens, however, dropping in quantity as the bulb ages. The ratio of rated voltage to line-pressure has a great effect upon the efficiency. Thus, if 100-volt (rated) bulbs are burned upon a line voltage of 115 volts, the lumens generated jump to sixty-one per cent. above normal. Thus the normal voltage 500-watt lamp generates 12,300 lumens; but if this lamp is rated at 100 volts and we apply 115, we raise the lumens to 19,803.

As the exposure required is more or less directly dependent upon the lumens available, it will be seen that we make a very distinct gain by using lamps on overrated current. This is the system known as "high-pressure" illumination.

Finally, we find that the reflector used makes available a greater or lesser percentage of the generated lumens. Ordinarily the light available would be only the spherical lumens reflected by the subject; but an efficient reflector will add from twenty per cent. to fifty per cent. to this reflected light, thus again "boosting" the light.

(*b*) It is essential to know the line-voltage available. Most home-circuits in this country are rated at 115 volts, although ordinarily called 110. The truth is that this voltage ranges from 90 to 125, or even 130.

The greatest variation is found in small communities where there is a wide range of current drain. In such communities the evening, with its peak load, drops the voltage tremendously. Suppose that we are using high-pressure lamps of 500 watts (Type T-20). At 90 volts we have available 8,610 lumens, while at 115 volts we have 19,803 lumens. With the usual three-lamp set-up, we have a difference of 25,830 against 59,409, or a ratio of roughly 1 : 2½. This is one reason for nonuniform exposure, for the eye can hardly detect the difference due to the tremendous brilliance of the lights at any voltage.

(*c*) The nature of the subject affects exposure greatly, as some fabrics and other substances reflect only a small amount of the light which falls upon them and others reflect a very great amount. Likewise the color of the subject will affect exposure, and the exposure factor due to color will undoubtedly change with the substitution of panchromatic for orthochromatic film, especially if the colors are nonactinic.

(*d*) In like manner the texture and color of the surrounding walls will decidedly affect the exposure. Thus a smooth white wall will make possible a full stop less than would be possible if the wall were decidedly mat and of a deep tan or cream-color. The distance of the side walls also make a decided difference, as the farther away they are the less brilliant will be the light reflected from such walls to the subject.

(*e*) Finally, the distance between light and subject will have a far greater effect than is usually thought, and the distance between camera and subject has a very slight bearing upon the exposure.

We know that the intensity of light falling upon any surface varies as the square of the distance between the light-source and the surface. Thus, if we have the lights placed at four feet in order to obtain a close-up, and then move back for a full shot to a distance which makes it necessary to place the lights eight feet away in order to remove them from the field, we shall have to give four times the exposure, or an increase of two stops.

Due to the fact that the light-intensity necessary to affect film is so greatly in excess of that necessary to affect the eye, the infinite variations which exert a marked effect upon exposure are hardly perceptible to the eye. For this reason, the human eye is thoroughly undependable as an aid to the estimation of exposure. The careful amateur will always make full and intelligent use of some kind of instrument for the estimation of exposure. The importance of correct exposure is amply demonstrated by the fact that practically every manufacturer of motion-picture cameras now either includes as an integral part of the camera-outfit, or else recommends without reservation, the use of the most approved type of photometric exposure-meter.

Following the opening paper of the evening, Mr. Russell Holslag of the Amateur Cinema League gave a very complete review of the various types of meter available and also gave explicit directions for the use of the Drem meter, the type universally recommended by manufacturers of cinema cameras.

An amusing incident occurred when Doctor Maximilian Toch told of an experience which took place in the Louvre. Doctor Toch, who is well known in international art-circles, as well as among pictorial photographers, was copying one of the paintings in the galleries when the official photographer came to make a copy of the same painting. Dr. Toch had taken a Justophot reading of the exposure and was giving a fourteen-minute exposure. He asked the photographer what exposure he was giving, and the reply was, "One hour and twenty minutes."

The next day he again saw the photographer making a duplicate exposure. Inquiry revealed that the first plate was hopelessly overexposed, while Doctor Toch had secured a perfect exposure. The Doctor ended by saying that a friend had just come from Berlin, bringing as a gift a new instrument which would perform miracles in photographic work. The Doctor opened the packet to find a Justophot—his third! The story was well received by the audience, few of whom, however, realised the identity of the celebrity who was speaking.

The meeting, in the absence of the president, Dr. Raymond Ditmars, was conducted under the direction of the well-known director of the Amateur Cinema League, Colonel Roy Winton. Colonel Winton is so well known in amateur circles in New York that he needed no introduction, and under the influence of his very attractive personality the events of the program were presented in a most engaging manner.

In every way this, the first of the season's meetings of this young club, was enjoyable and, we trust, profitable. All of our readers who live in the metropolitan area of New York are urged to visit the next meeting, which will be duly announced.

There is much to be gained by coming into contact with men and women who are interested in the same thing. By giving and taking helpful suggestions the association with others leads to greater and better photographic and artistic results.

## H. A. DeVry Devoting Time To Research

H. A. DeVry, vice president of the Q. R. S.-DeVry Corporation and inventor of the first successful portable motion-picture projector of the suit-case variety, is now devoting his entire time to research and experimental work on motion-picture equipment which bears his name.

This change was made possible by consolidating the DeVry factory, headed by H. A. DeVry, with what was formerly the Q. R. S. Factory situated at 48th St. and Kedzie Ave., Chicago. All manufacturing activities are now being carried on at the Kedzie Ave. plant. It was decided that by concentrating all motion-picture manufacturing activities under one roof and management, a more efficient and economical operating plan would be effected.

The DeVry Corporation consolidated with the Q. R. S. Company in April of last year. The latter manufactured a complete line of amateur 16 mm. motion-picture equipment in the low-price field and the DeVry Corporation specialised in 35 mm. motion-picture equipment sold largely for school, professional and semi-professional uses.

## Teaching Ethical Conduct with Motion-Pictures

The first and only sane move that has been brought to my attention, and that bids fair to develop into a scientific study of higher ethics—so terribly needed by all of us—comes curiously from a motion-picture concern.

With the sole purpose of creating educational film for introduction in our school system, the logical place for modern education, the DeVry School Films Company has actually undertaken to teach social reform and higher ethics to our children.

To be sure, there is the usual filming of Geography and History, made to show action in a manner that beats the average teacher's methods all hollow; then



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there are films showing within ten seconds the growth of plants that, by the method of explanation, would tire out both Job and Methuselah.

Children cannot grasp abstract notions of morals and ethics until they begin to experience them. Normally, a child must lie in order to experience the abstraction and have us discuss it clearly to his understanding and intelligence. But in the movies, we don't have to wait until the child actually lies. A story may be built up to show a situation where a lie may be used, and moral conduct deducted therefrom. Equally, it will soon be possible to show a young man, matrimonially inclined, the natural process of marrying through natural impulse, and its consequences—or, on the other hand, of marrying through a proper conception of companionship. *This form of education, this heading off of domestic difficulties before they arrive, is a wholly new form, with the field of investigation not even scratched.* It treats the patient before he gets into trouble. All forms of moral reactions may thus be placed, not only before the children from primary to college, but before parents. It may be made to include all ethics, domestic and international. It is the way out for education, and the public is ready and eager for it, but at present does not know where to look.

The list of moral and ethical teachings is unlimited. Influences of habit and emotion, differences in temperament, eccentricities of genius, retaliation, control of the unruly, affection and its influences; loss or denial of affection and its result—why, the whole subject is capable of tremendous expansion, and the demand is inexhaustible!

No one in his senses expects legal reform to come through the aid of lawyers, nor can anyone expect educational reform from within. Scientific development of moral codes cannot come from a group who know absolutely nothing of the subject after seventy-five years' opportunity to develop such a form of education.

It has remained for the DeVry Company to make a start and to bring the human family into harmony. How can we control humanity if we don't understand it?

It is ignorance of moral and social law that provokes our troubles today, and if a motion-picture company can give us a start and teach our children higher ethics, and so keep them out of trouble before they get into it, then, I say, support the idea; and I hope they get their films into every school in the country and that they profit accordingly. They will become benefactors in fact and should have the reward.

*Excerpt from Radio Speech over Columbia System, New York City.*

## The Dusenbery System of Exposure Estimation

It would seem that the greater number of pioneer motion-picture enthusiasts and experimenters are grouped in New York City. Karl Barleben, Carl Oswald, Walter Kerst, Don Bennett, Russell Holslag need no introduction. To this number has been added Jackson Kleber, our sound-expert. All are resident in New York; but far away in San Francisco there is another who certainly has every right to be numbered with this group. H. Syril Dusenbery has been a consistent experimenter since the earliest days of the movement, and his efforts have added many definitely valuable items of knowledge to our activities. Mr. Dusenbery has just contributed his new system of exposure-estimation. For those who wish to gain a thorough knowledge of this subject, a careful study of the system is recommended.

It will be noticed that the numbers which are obtained do not exactly correspond with the *f*/numbers as given upon the usual lens-mount. The nearest engraved stop-number is chosen according to the following table:

| *Factor secured* | *Scale number* |
|---|---|
| 16 | 16 |
| 12 | 11 |
| 9 | 8 |
| 6 | 5.6 |
| 4 | 4.5 |
| 3 | 3.5 |
| 1 | 1.5 or 1.8 |

As Mr. Dusenbery says, this is not a substitute for the exposure-meter; but he should certainly be complimented for originating such a simple and effective emergency system for exposure computation.

### Short-Cut Idea for Quick Estimation of Approximate Exposure

*"Dusenbery Method"*

This system is for amateur movie cameras based on normal shutter-speed, 16-millimeter reversible film, and average Northern latitudes under ordinary summer light-conditions.

Although it is recognised that the many factors that enter into the determination of the correct exposure make it almost impossible to devise any arbitrary rule-of-thumb method to fit all cases, the following system will, under ordinary conditions, give a remarkably close approximation. It is not intended that this system take the place of an exposure-meter. It is merely suggested as a simple aid to those desiring to estimate exposure quickly when no meter is available.

The simplicity of this system makes it easy to memorise, no tables, charts, or cumbersome calculations being necessary. In fact, it is almost uncanny the way it works out.

In this system the light-conditions and subjects are each divided into four general groups. Memorise these four groups and you will have the whole system on your fingertips.

LIGHT GROUPS

1. *Very Dull.* Overcast sky with heavy black clouds.
2. *Dull.* Generally cloudy, no direct sunlight.
3. *Bright.* Sun shining through thin clouds or haze.
4. *Brilliant.* Bright sun in clear sky—no haze.

SUBJECT GROUPS

1. *Heavy Shade.* Subjects under trees, on porches, etc.
2. *Streets.* Buildings, etc., partly in shade.
3. *Open Landscapes.* White buildings, sports, open places with little or no shade.
4. *Sea, Sky, Snow, Beach,* and subjects reflecting strong light.

To Estimate Exposure: *Multiply the subject number by the light number.* Result is the lens-setting in the F/ system.

*Examples:*

Street scene with brilliant light:
2 x 4—F/8
Open scene with dull light: 3 x 2—F/6 (use F/5.6)
Street-scene with dull light: 2 x 2—F/4 (use F/4.5)

LANDSCAPE
SOPHIE L. LAUFFER, F.R.P.S.
SIXTEENTH PITTSBURGH SALON
TENTH SALON, BUFFALO CAMERA CLUB